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BY

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PREFACE.

By the Constitution of the Commonwealth of Australia, the Parliament of the Commonwealth is empowered "to make laws for the peace, order, and good government of the Commonwealth, with respect to Census and Statistics." In the exercise of the power so conferred, a "Census and Statistics Act" was passed in 1905, and in the year following the "Commonwealth Bureau of Census and Statistics" was created. The first Official Year Book was published early in 1908. The publication here presented is the eighteenth Official Year Book issued under the authority of the Commonwealth Government.

The synopsis on pp. VII. to XXII. immediately following shows the general arrangement of the work. In addition to the ordinary Chapters, each issue contains special articles dealing with some particular subject or subjects of more or less permanent interest. These cannot of course be repeated year after year, but in some instances a brief condensation is given in subsequent issues. While portion of the matter contained in Year Books Nos. 1 to 17 has been reduced to synopses or deleted in the present issue, the special index provided at the end of the volume will assist in tracing it in previous issues.

The present issue contains a specially-contributed article, dealing with "Industrial Hygiene in Australia," placed at the end of Chapter XII., "Public Hygiene."

Amongst the new matter contained in the various Chapters, mention may be made of the sub-section dealing with the Care of the Feeble-minded, which appears in Chapter XI., "Public Benevolence"; the sub-section dealing with "The Chinese," in Chapter XXIV., "Population"; the descriptive matter relating to the Solar Observatory at Canberra, the account of the various investigations into the Wealth of Australia, and the conspectus of Life Assurance Legislation in Chapter XXVI., "Miscellaneous": while the section dealing with the Federal Capital Territory in Chapter XV., "The Territories of the Commonwealth," has been largely re-written.

The full text of the Commonwealth Constitution Act and Amendments appears on pages 20 to 37.

Recent information or returns which have come to hand since the various Chapters were sent to press will be found in the Appendix, p. 1069.

The material contained in each issue is always carefully examined, but it would be idle to hope that all error has been avoided. The Commonwealth Statistician desires to express appreciation of the opportunity afforded him of improving the Year Book, by those who have been kind enough to point out defects or make suggestions.

My best thanks are due to the State Statisticians, to the responsible officers of the various Commonwealth and State Departments, and to others, who have kindly, and often at considerable trouble, supplied information for this issue.

In conclusion, I wish to express my keen appreciation of the valuable work performed by Mr. Stonham, the editor of the Year Book, and also of the services rendered by the officers in charge of the various branches of the Commonwealth Bureau of Census and Statistics, upon whom has devolved the duty of revising, or in some cases of re-writing the Chapters relative to their respective branches.

CHAS. H. WICKENS,
Commonwealth Statistician and Actuary.

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STATISTICAL SUMMARY.

STATISTICAL SUMMARY, AUSTRALIA, 1871 TO 1924.

Heading.		Years.					
		1871.	1881.	1891.	1901.	1911.	1921.
Population ..	Males	928,918	1,247,059	1,736,617	2,004,836	2,382,232	2,798,727
	Females	771,970	1,059,677	1,504,368	1,820,077	2,191,554	2,710,346
	Total	1,700,888	2,306,736	3,240,985	3,824,913	4,573,786	5,509,073
Births ..	No.	63,625	80,004	110,187	102,945	122,193	136,198
	Rate	38.00	35.26	34.47	27.16	27.21	24.95
Deaths ..	No.	22,175	33,327	47,430	46,330	47,869	54,076
	Rate	13.24	14.69	14.84	12.22	10.66	9.91
Marriages ..	No.	11,623	17,244	23,862	27,753	39,482	46,869
	Rate	6.94	7.60	7.47	7.32	8.79	8.59
Agriculture—							
Wheat ..	Area, acs.	1,279,778	3,002,064	3,335,528	5,115,965	7,427,834	9,719,042
	Yld., bshl.	11,917,741	21,443,862	25,675,265	38,561,619	71,636,347	129,088,806
	Av.	9.31	7.14	7.70	7.54	9.64	13.28
Oats ..	Area, acs.	225,492	194,816	246,129	461,430	616,794	733,406
	Yld., bshl.	4,251,630	4,795,897	5,726,256	9,789,854	9,561,833	12,147,433
	Av.	18.85	24.62	23.27	21.22	15.50	16.56
Barley ..	Area, acs.	48,164	75,864	68,068	74,511	118,466	298,910
	Yld., bshl.	726,158	1,353,380	1,178,560	1,519,819	2,056,686	6,085,685
	Av.	15.08	17.84	17.31	20.40	17.66	20.36
Malze ..	Area, acs.	142,078	165,777	284,428	294,849	340,065	305,186
	Yld., bshl.	4,576,635	5,726,266	9,261,022	7,034,786	9,939,855	7,840,438
	Av.	32.21	34.54	32.56	23.86	26.29	25.69
Hay ..	Area, acs.	303,274	768,388	942,166	1,688,402	2,518,351	2,994,519
	Yld., tons	375,871	767,194	1,067,255	2,024,608	2,867,973	3,902,189
	Av.	1.24	1.00	1.13	1.20	1.14	1.30
Potatoes(n) ..	Area, acs.	67,911	76,265	112,884	109,685	130,463	149,144
	Yld., tons	212,896	243,216	380,477	322,524	301,489	388,091
	Av.	3.13	3.19	3.37	2.94	2.31	2.60
SugarCane(d) ..	Area, acs.	11,576	19,708	45,444	86,950	101,010	197,293
	Yld., tons	176,632	349,627	737,573	1,367,802	1,682,250	2,436,890
	Av.	15.25	17.74	16.23	15.73	16.65	18.99
Vineyards ..	Area, acs.	16,253	14,570	48,882	63,677	60,602	92,414
	Wine, gal.	2,104,000	1,488,000	3,535,000	5,816,087	4,975,147	8,562,573
Total value all agricul- tural production ..		£ 8,941,000	15,519,000	16,480,000	23,835,000	38,774,000	81,889,700
Pastoral, dairying, etc.—							
Live Stock	Sheep No.	40,072,955	65,092,719	106,421,068	72,340,211	93,003,521	82,226,470
	Cattle "	4,277,228	8,010,991	11,112,112	8,491,428	11,828,954	14,441,809
	Horses "	701,530	1,088,029	1,584,737	1,620,420	2,278,226	2,438,182
Wool prod., lb. greasy	Pigs	586,017	703,188	845,888	931,309	1,110,721	960,385
	Butter production lbs.	(c)	(c)	47,433,564	101,671,066	211,573,745	267,071,340
Cheese "	"	(c)	(c)	19,146,929	11,575,692	15,886,712	32,653,003
	Bacon and ham "	(c)	(c)	(c)	34,020,629	53,264,652	58,614,459
Total estimated value of pastoral and dairying production ..		£ 20,736,000	20,538,000	39,256,000	36,890,000	69,832,000	113,671,000
Mineral production—							
Gold ..	£	7,916,627	5,194,390	5,281,309	14,017,508	10,551,624	4,018,685
	£	36,528	45,622	3,736,352	2,367,687	3,022,177	1,539,992
Silver and lead ..	£	830,242	714,093	367,373	2,215,431	2,564,278	803,057
	£	24,020	1,145,889	560,502	448,234	1,209,973	418,418
Copper ..	£	369	200	2,979	4,067	1,415,169	283,455
	£	330,759	637,865	1,914,026	2,602,770	3,929,673	11,014,831
Total value all mineral production ..		£ 9,190,330	7,820,290	12,108,759	21,922,665	23,494,324	19,977,384
Forestry production—							
Quantity of local tim- ber sawn or hewn 1,000 sup. ft.		(c)	(c)	(c)	452,131	604,794	590,495
Manufactories—							
No. of factories	£	(b)	(b)	(b)	(b)	14,455	18,023
	£	(b)	(b)	(b)	(b)	311,710	395,425
Hands employed	£	(b)	(b)	(b)	(b)	27,528,371	68,050,561
	£	(b)	(b)	(b)	(b)	133,022,090	320,331,765
Total value of output		£					
Value added in process of manufacture		£				51,259,004	121,674,119
							141,242,417

(a) Partly estimated 1871 and 1881. (b) Owing to variation in classification and lack of information effective comparison is impossible. (c) Information not available. (d) Area of productive cane. (e) 1923 figures.

STATISTICAL SUMMARY.—AUSTRALIA, 1871 TO 1924—continued.

Heading.	Years.						
	1871.	1881.	1891.	1901.	1911.	1921.	1924.
Shipping—							
Oversea vessels { No. 2,748 3,284 3,778 4,028 4,174 3,674 3,122							
ent. & cleared { ton. 1,312,642 2,549,364 4,726,307 6,541,991 9,984,801 9,503,018 9,922,814							
Commerce (c)—							
Imports oversea £ 17,017,000 29,067,000 37,711,000 42,434,000 66,967,488 103,066,436 157,097,465							
“ per head £ 10/3/3 12/16/2 11/16/0 11/3/11 14/18/2 18/14/1 26/14/11							
Exports oversea £ 21,725,000 27,528,000 36,043,000 49,696,000 79,482,258 127,846,535 161,106,111							
“ per head £ 12/19/6 12/2/8 11/5/6 13/2/2 17/13/10 23/4/1 27/8/7							
Total oversea trade £ 38,742,000 56,595,000 73,754,000 92,130,000 146,449,746 230,912,971 318,203,576							
“ per head £ 23/2/9 24/18/10 23/1/6 24/6/1 32/12/0 41/18/2 54/3/6							
Customs and excise duties £ (e) 4,809,326 7,440,869 8,656,530 13,515,005 27,565,199 37,216,951							
“ per head, £ (e) 2/2/5 2/8/7 2/5/8 2/19/2 5/0/1 6/6/9							
Principal Oversea Exports (a)—							
Wool { lbs. (greasy) 176,635,800 328,369,200 619,259,800 518,018,100 720,364,900 927,833,700 578,998,734							
£ 9,459,629 13,173,026 19,940,029 15,237,454 26,071,193 47,977,044 63,192,445							
Wheat { cents 479,954 3,218,792 5,876,875 12,156,035 33,088,704 59,968,334 61,803,562							
£ 193,732 1,189,792 1,938,864 2,774,643 9,641,608 28,644,155 34,413,386							
Flour { tons 12,988 49,549 33,363 96,814 175,891 359,734 448,047							
£ 170,415 519,635 328,423 589,604 1,391,529 5,519,881 6,186,275							
Butter { lbs. 1,812,700 1,298,800 4,239,500 34,607,400 101,722,100 127,347,400 145,281,285							
£ 45,813 39,383 206,868 1,451,168 4,637,362 7,968,078 10,006,081							
Skins and hides £ 100,123 316,878 873,695 1,250,938 3,227,236 3,136,810 8,149,117							
Tallow .. £ 914,278 644,149 571,069 677,745 1,935,836 1,441,795 1,729,295							
Meats .. £ 566,780 362,965 460,894 2,611,244 4,303,159 5,542,102 7,001,821							
Timber (undressed) £ 42,586 118,117 38,448 731,301 1,023,960 1,158,166 1,579,627							
Gold £ 7,184,833 6,445,365 5,703,532 14,315,741 12,045,766 3,483,239 956,403							
Silver and lead £ 37,891 57,954 1,932,278 2,250,253 3,212,584 2,697,130 5,822,095							
Copper .. £ 598,538 676,515 417,687 1,619,145 2,345,961 705,358 235,982							
Coal .. £ 134,355 361,081 645,972 986,957 900,622 1,099,899 1,079,578							
Govt. Railways—							
Length of line open, mls. 970 3,832 9,541 12,579 16,078 23,296 24,484							
Capital cost £ 19,269,786 42,741,350 99,764,090 123,223,779 152,194,603 237,479,693 263,293,099							
Gross revenue £ 1,102,650 3,910,122 8,654,085 11,038,468 17,847,837 35,936,900 41,384,941							
Working expenses £ 608,332 2,141,735 5,630,182 7,133,617 10,945,727 29,069,954 30,851,274							
Per cent. of work'g expenses on earnings % 55.17 54.77 65.06 64.63 61.33 83.39 74.56							
Postal—							
Letters and postcards dealt with No. 24,382,000 67,640,000 157,297,000 220,853,000 453,063,000 569,343,456 643,403,000							
“ per head 14.54 29.61 49.07 58.26 100.90 104.36 110.86							
Newspapers dealt with No. 3,336,000 38,063,000 85,230,000 102,727,000 141,638,000 130,882,425 162,772,000							
“ per head 7.95 16.66 26.61 27.10 31.54 24.18 28.05							
Cheque-paying Banks—							
Note circulation £ 2,456,487 3,978,711 4,417,269 3,406,175 876,428 211,187 202,875							
Coin & bullion held £ 6,168,869 9,108,243 16,712,923 19,737,572 30,024,225 22,092,371 31,730,324							
Advances £ 26,039,573 57,732,824 129,741,583 89,167,499 116,769,133 233,214,626 209,401,240							
Deposits £ 21,856,959 53,849,455 98,345,338 90,965,530 147,103,081 273,866,737 321,594,080							
Savings Banks—							
Number of accounts open 100,713 250,070 614,741 964,553 1,600,112 3,327,456 3,798,662							
Total deposits £ 3,193,285 7,854,480 15,536,592 30,882,645 59,393,682 154,396,051 176,871,477							
Aver. per account £ 31/14/2 31/8/2 25/5/6 32/0/4 37/2/4 46/8/0 46/11/3							
“ per head of population £ 1/18/9 3/10/5 4/18/7 8/3/0 13/8/5 28/0/4 30/9/6							
State Schools—							
Number of schools .. 2,502 4,494 6,231 7,012 8,060 9,445 (d) 10,053							
Teachers .. No. 4,641 9,028 12,564 14,500 16,971 26,120 (d) 26,906							
Enrolment .. 236,710 452,320 561,153 638,478 638,580 819,042 (d) 848,882							
Aver. attendance .. 137,767 255,143 350,773 450,246 463,799 666,498 (d) 685,233							

(a) Australian produce, except gold, which includes re-exports. Preliminary figures for 1924. (b) Decrease due to prohibition of re-issue. (c) Figures for Commerce for years 1921 and 1924 relate to year ended 30th June following. (d) 1923 figures. (e) Not available.

CHRONOLOGICAL TABLE.

CHRONOLOGICAL TABLE OF CHIEF EVENTS SINCE THE ESTABLISHMENT OF SETTLEMENT IN AUSTRALIA.

NOTE.—The Government was centralized in Sydney, New South Wales, up to 1825, when Tasmania (Van Diemen's Land) was made a separate colony. In the Table, the names now borne by the States serve to indicate the localities.

Year.

- 1788 N.S.W.—Arrival of "First Fleet" at Botany Bay. Land in vicinity being found unsuitable for settlement, the expedition moved to Sydney Cove (now Port Jackson). Formal possession of Port Jackson taken by Captain Phillip on 26th January. Formal proclamation of colony on 7th February. Branch settlement established at Norfolk Island. French navigator Lapérouse visited Botany Bay. First cultivation of wheat and barley. First grape vines planted.
- 1789 N.S.W.—First wheat harvest at Parramatta, near Sydney. Discovery of Hawkesbury River. Outbreak of small-pox amongst aborigines.
- 1790 N.S.W.—"Second Fleet" reached Port Jackson. Landing of the New South Wales Corps. Severe suffering through lack of provisions. First circumnavigation of Australia by Lieut. Ball.
- 1791 N.S.W.—Arrival of "Third Fleet." Territorial seal brought by Governor King.
- 1792 N.S.W. Visit of *Philadelphia*, first foreign trading vessel.
- 1793 N.S.W.—First free immigrants arrived in the *Bellona*. First Australian church opened at Sydney. Tas.—D'Entrecasteaux discovered the Derwent River.
- 1794 N.S.W.—Establishment of settlement at Hawkesbury River.
- 1795 N.S.W.—Erection of the first printing press at Sydney. Descendants of strayed cattle discovered at Cowpastures, Nepean River.
- 1796 N.S.W.—First Australian theatre opened at Sydney. Coal discovered by fishermen at Newcastle.
- 1797 N.S.W.—Introduction of merino sheep from Cape of Good Hope.
- 1798 Tas.—Insularity of Tasmania proved by voyage of Bass and Flinders.
- 1800 N.S.W.—First export of coal. First Customs House in Australia established at Sydney. Flinders' charts published.
- 1801 N.S.W.—First colonial manufacture of blankets and linen.
- 1802 Vic.—Discovery of Port Phillip by Lieut. Murray. S.A.—Discovery of Spencer's and St. Vincent Gulfs by Flinders. Q'land.—Discovery of Port Curtis and Port Bowen by Flinders.
- 1803 N.S.W.—First Australian wool taken to England by Capt. Macarthur. Issue of "The Sydney Gazette," first Australian newspaper. Vic.—Attempted settlement at Port Phillip by Collins. Discovery of Yarra by Grimes. Tas.—First settlement formed at Risdon by Lieut. Bowen.
- 1804 N.S.W.—Insurrection of convicts at Castle Hill. Vic.—Abandonment of settlement at Port Phillip. Tas.—Foundation of settlement at Hobart by Collins, and at Yorktown by Colonel Paterson.
- 1805 N.S.W.—First extensive sheep farm established at Camden by Capt. Macarthur. Portion of convicts from Norfolk Island transferred to Tasmania.
- 1806 N.S.W.—Shortage of provisions. Tas.—Settlement at Launceston.
- 1807 N.S.W.—Final shipment of convicts from Norfolk Island. First shipment of merchantable wool (245 lbs.) to England.
- 1808 N.S.W.—Deposition of Governor Bligh.
- 1809 N.S.W.—Isaac Nichols appointed to supervise delivery of overseas letters.
- 1810 N.S.W.—Post-office officially established at Sydney. Isaac Nichols first postmaster. First race meeting in Australia at Hyde Park, Sydney. Tas.—First Tasmanian newspaper printed.
- 1813 N.S.W.—Passage across Blue Mountains discovered by Wentworth, Lawson, and Blaxland. Macquarie River discovered by Evans.
- 1814 N.S.W.—Australia, previously known as "New Holland," received present name on recommendation of Flinders. Creation of Civil Courts.

Year.

- 1815 N.S.W.—First steam engine in Australia erected at Sydney. Lachlan River discovered by Evans. Tas.—Arrival of first immigrant ship with free settlers. First export of wheat to Sydney.
- 1816 N.S.W.—Botanic Garden formed at Sydney.
- 1817 N.S.W.—Oxley's first exploration inland. Discovery of Lakes George and Bathurst and the Goulburn Plains by Meehan and Hume. First bank in Australia opened at Sydney.
- 1818 N.S.W.—Cessation of free immigration. Liverpool Plains, and the Peel, Hastings, and Manning Rivers discovered by Oxley, and Port Essington by Captain King.
- 1819 N.S.W.—First Australian Savings Bank opened at Sydney.
- 1820 Tas.—First importation of pure merino sheep.
- 1821 Tas.—Establishment of penal settlement at Macquarie Harbour.
- 1823 N.S.W.—First Australian Constitution. Discovery of gold at Fish River by Assistant-Surveyor McBrien. Qld.—Brisbane River discovered by Oxley.
- 1824 N.S.W.—Erection into Crown Colony. Executive Council formed. Establishment of Supreme Court at Sydney, and introduction of trial by jury. First Australian Enactment (Currency Bill) passed by the Parliament at Sydney. Proclamation of freedom of the press. First manufacture of sugar. Vic.—Hume and Hovell, journeying overland from Sydney, arrived at Corio Bay. Qld.—Penal settlement founded at Moreton Bay (Brisbane). Fort Dundas Settlement formed at Melville Island, N. Terr.
- 1825 N.S.W.—Extension of western boundary to 129th meridian. Tas.—Separation of Van Diemen's Land (Tasmania). Qld.—Major Lockyer explored Brisbane River to its source, and discovered coal.
- 1826 N.S.W.—Settlement in Illawarra District. Vic.—Settlement at Corinella, Western Port, formed by Captain Wright.
- 1827 N.S.W.—Colony became self-supporting. Feverish speculation in land and stock. Qld.—Darling Downs and the Condamine River discovered by Allan Cunningham. W.A.—Military Settlement founded at King George's Sound by Major Lockyer.
- 1828 N.S.W.—Second constitution. First Census. Sturt's expedition down Darling River. Cotton first grown in Sydney Botanical Gardens. Gas first used at Sydney. Richmond and Clarence Rivers discovered by Captain Rous. Vic.—Abandonment of settlement at Western Port. Qld.—Cunningham discovered a route from Brisbane to the Darling Downs, and explored Brisbane River.
- 1829 N.S.W.—Sturt's expedition down Murrumbidgee River. W.A.—Foundation of settlement at Swan River. Foundation of Perth.
- 1830 N.S.W.—Insurrection of convicts at Bathurst. Sturt, voyaging down Murrumbidgee and Murray Rivers, arrived at Lake Alexandrina. Tas.—Trouble with natives. Black line organized to force aborigines into Tasman's Peninsula, but failed. Between 1830 and 1835, however, George Robinson, by friendly suasion, succeeded in gathering the small remnant of aborigines (203) into settlement on Flinders Island.
- 1831 N.S.W.—Crown lands first disposed of by public competition. Mitchell's explorations north of Liverpool Plains. Arrival at Sydney of first steamer, *Sophia Jane*, from England. S.S. *Surprise*, first steamship built in Australia, launched at Sydney. First coal shipped from Australian Agricultural Company's workings at Newcastle, N.S.W. First assisted immigration to N.S.W. S.A.—Wakefield's first colonization committee. W.A.—Appointment of Executive and Legislative Councils.
- 1832 N.S.W.—Savings Bank of N.S.W. established.
- 1833 N.S.W.—First School of Arts established at Sydney.
- 1834 N.S.W.—First settlement at Twofold Bay. Vic.—Settlement formed at Portland Bay by Henty Bros. Qld.—Leichhardt reached Gulf of Carpentaria. S.A.—Formation of the South Australian Association. W.A.—Severe reprisals against natives at Pinjarrah.
- 1835 Vic.—John Batman arrived at Port Phillip; made treaty with the natives for 600,000 acres of land; claim afterwards disallowed by Imperial Government. John Pascoe Fawcner founded Melbourne.
- 1836 N.S.W.—Mitchell's overland journey from Sydney to Cape Northumberland, Vic., "Squatting" formally recognized. Vic.—Proclamation of Port Phillip district as open for settlement. S.A.—Settlement founded at Adelaide under Governor Hindmarsh.

Years.

- 1837 N.S.W.—Appointment in London of Select Committee on Transportation. Vic.—Melbourne planned and named by Governor Bourke. First Victorian post-office established in Melbourne. First overlanders from Sydney arrived at Port Phillip.
- 1838 N.S.W.—Discontinuance of assignment of convicts. Qld.—Settlement of German missionaries at Brisbane. S.A.—“Overlanding” of cattle from Sydney to Adelaide along the Murray route by Hawden and Bonney. Settlement at Port Essington, Northern Territory, formed by Captain Bremer.
- 1839 N.S.W.—Gold found at Vale of Clwydd by Count Strzelecki. S.A.—Lake Torrens discovered by Eyre. Port Darwin discovered by Captain Stokes. W.A.—Murchison River discovered by Captain Grey.
- 1840 N.S.W.—Abolition of transportation to New South Wales. Land regulations—proceeds of sales to be applied to payment for public works and expenditure on immigration. Vic.—Determination of northern boundary. Qld.—Penal settlement broken up and Moreton Bay district thrown open. S.A.—Eyre began his overland journey from Adelaide to King George's Sound.
- 1841 N.S.W.—Gold found near Hartley by Rev. W. B. Clarke. Separation of New Zealand. W.A.—Completion of Eyre's overland journey from Adelaide to King George's Sound. Tas.—Renewal of transportation.
- 1842 N.S.W.—Incorporation of Sydney. Vic.—Incorporation of Melbourne. S.A.—Discovery of copper at Kapunda.
- 1843 N.S.W.—First Representative Constitution (under Act of 1842). First manufacture of tweed. Qld.—Moreton Bay granted legislative representation.
- 1844 S.A.—Sturt's last expedition inland. Qld.—Leichhardt's expedition from Condamine River to Port Essington.
- 1845 N.S.W.—Mitchell's explorations on the Barcoo. Qld.—Explorations by Mitchell and Kennedy. S.A.—Discovery of the Burra copper deposits. Sturt discovered Cooper's Creek.
- 1846 N.S.W.—Initiation of meat preserving. Qld.—Foundation of settlement at Port Curtis. S.A.—Proclamation of North Australia. W.A.—Foundation of New Norcia Mission.
- 1847 N.S.W.—Iron smelting commenced near Berrima. Overland mail established between Sydney and Adelaide. Vic.—Melbourne created a City. Qld.—Explorations by Leichhardt, Burnett, and Kennedy.
- 1848 Qld.—Leichhardt's last journey. Kennedy speared by the blacks at York Peninsula. Chinese brought in as shepherds.
- 1849 N.S.W.—Indignation of colonists at arrival of convict ship *Hashemy*. Exodus of population to goldfields of California. Vic.—Randolph prevented from landing convicts. Qld.—Assignment of convicts per *Hashemy* to squatters on Darling Downs. W.A.—Commencement of transportation to Western Australia.
- 1850 N.S.W.—Final abolition of transportation. First sod of first Australian railway turned at Sydney. Vic.—Gold discovered at Clunes by Hon. W. Campbell. Representative government granted. S.A.—Representative government granted. W.A.—Pearl oysters found by Lieut. Helpman at Saturday Island Shoal. Tas.—Representative government granted.
- 1851 N.S.W.—Payable gold discovered by Hargraves at Lewis Ponds and Summerhill Creeks. Telegraph first used. Vic.—Separation of Port Phillip—erected into independent colony under the name of Victoria. Discovery of gold in various localities. “Black Thursday,” 6th Feb., a day of intense heat, when several persons died and a vast amount of damage to property was occasioned by fires. W.A.—Proclamation of Legislative Council Act.
- 1852 N.S.W.—Arrival of the *Chusan*, first P. and O. mail steamer from England. S.A.—First steamer ascends the Murray River to the junction with the Darling. Tas.—Meeting of first elective Council protests against transportation. Payable gold discovered at The Nook, near Fingal, and at Nine Mile Springs.
- 1853 Tas.—Abolition of transportation.
- 1854 Vic.—Opening of first Victorian railway—Flinders-street to Port Melbourne. Riots on Ballarat goldfields. Storming of the Eureka Stockade, 3rd Dec.
- 1855 N.S.W.—Opening of railway—Sydney to Parramatta. Mint opened. Gregory's expedition in search of Leichhardt.
- 1856 N.S.W.—Pitcairn Islanders placed on Norfolk Island. W.A.—A. C. Gregory's expedition in search of Leichhardt.
- Responsible Government in N.S.W., Vic., S.A., and Tas. (Act of 1855).

Year.

- 1857 N.S.W.—Wreck of the *Dunbar* (119 lives lost), and *Catherine Adamson* (21 lives lost), at Sydney Heads. Select Committee on Federation. Vic.—Manhood suffrage and vote by ballot. S.A.—Passage of Torrens' Real Property Act.
- 1858 N.S.W.—Establishment of manhood suffrage and vote by ballot. Telegraphic communication between Sydney, Melbourne, and Adelaide. Qld.—Canoona gold rush.
- 1859 Qld.—Proclamation of Queensland as separate colony. Tas.—First submarine cable, via Circular Head and King Island, to Cape Otway.
- 1860 Vic.—Burke and Wills left Melbourne and crossed to Gulf of Carpentaria. S.A.—Copper discoveries at Wallaroo and Moonta.
- 1861 N.S.W.—Anti-Chinese riots at Lambing Flat and Burrangong goldfields. Opening of first tramway in Sydney. Regulation of Chinese immigration. Vic.—Burke and Wills perished at Cooper's Creek, near Innamincka, S.A.
- 1862 N.S.W.—Abolition of State aid to religion. Real Property Act. S.A.—Stuart crossed the Continent from south to north. W.A.—First export of pearl-shell.
- 1863 Vic.—Intercolonial Conference at Melbourne. S.A.—Northern Territory taken over. W.A.—Initiation of settlement in the North-west district. Henry Maxwell Lefroy discovered and traversed area now comprised in the Coolgardie-Kalgoorlie goldfield.
- 1864 Qld.—First railway begun and opened. First sugar made from Queensland cane. Tas.—First successful shipment of English salmon ova.
- 1865 N.S.W.—Destruction by fire of St. Mary's Cathedral, Sydney.
- 1866 N.S.W.—Passage of Public Schools Act of (Sir) Henry Parkes. S.A.—Introduction of camels for exploration, etc.
- 1867 Vic.—Imposition of protective tariff. Qld.—Discovery of gold at Gympie.
- 1868 N.S.W.—Attempted assassination of the Duke of Edinburgh at Clontarf, near Sydney. W.A.—Arrival of the *Hougomont*, last convict ship. Tas.—First sod of first railway (Launceston and Western) turned by Duke of Edinburgh.
- 1869 W.A.—First telegraph line opened from Perth to Fremantle.
- 1870 N.S.W.—Intercolonial Exhibition opened at Sydney. Imperial troops withdrawn. Vic.—Intercolonial Congress at Melbourne. S.A.—Commencement of trans-continental telegraph.
- 1871 N.S.W.—Permanent military force raised. W.A.—Passage of Elementary Education Act. Forrest's explorations. Tas.—Discovery of tin at Mount Bischoff. Launceston-Western railway opened for traffic.
- 1872 N.S.W.—International Exhibition at Sydney. Vic.—Mint opened. S.A.—Cable from Java to Port Darwin. Completion of transcontinental telegraph line.
- 1873 N.S.W.—Intercolonial Conference at Sydney. First volunteer encampment. Inauguration of mail service with San Francisco.
- 1874 N.S.W.—Triennial Parliaments Act passed. Intercolonial Conference. W.A.—John and Alexander Forrest arrived at Overland Telegraph from Murchison.
- 1875 Qld.—Transfer of Port Albany Settlement to Thursday Island.
- 1876 N.S.W.—Completion of cable—Sydney (La Perouse) to Wellington (Wakapuaka). W.A.—Giles crosses colony from east to west. Tas.—Death of Truganini, last representative of Tasmanian aborigines.
- 1877 W.A.—Opening of telegraphic communication with South Australia.
- 1878 Qld.—Restriction of Chinese immigration.
- 1879 N.S.W.—First artesian bore at Killara. International Exhibition at Garden Palace, Sydney. First steam tramway. W.A.—A. Forrest's explorations in the Kimberley district, and discovery of the Fitzroy pastoral country.
- 1880 N.S.W.—Public Instruction Act passed. Vic.—Opening of first Victorian International Exhibition at Melbourne. Federal Conference at Melbourne and Sydney.
- 1881 N.S.W.—Further restrictions on Chinese immigration. Visit to Australia of T.R.H. Prince Albert Victor and Prince George.
- 1882 N.S.W.—Garden Palace destroyed by fire. W.A.—Nugget of gold found between Roebourne and Cossack.
- 1883 N.S.W.—Discovery of silver at Broken Hill. Completion of railway between New South Wales and Victoria. Qld.—Annexation of New Guinea—repudiated by Imperial authorities. Federal Conference held at Sydney. Federal Council created.

Year.

- 1884 Federation Bill passed in Victoria and rejected in New South Wales. British protectorate declared over New Guinea.
- 1885 N.S.W.—Military contingent sent to the Sudan. Opening of the Broken Hill Proprietary Silver Mines. W.A.—Gold found by prospectors on the Margaret and Ord Rivers in the Kimberley district Tas.—Silver-lead discovered at Mount Zeehan.
- 1886 Tas.—Discovery of gold and copper at Mount Lyell.
First session of Federal Council met at Hobart on the 26th January.
- 1887 N.S.W.—Disaster at Bulli coal mine (81 lives lost). Peat's Ferry (Hawkesbury River) railway accident. S.A.—International Exhibition at Adelaide. W.A.—Cyclone destroyed nearly the whole pearling fleet off the Ninety-Mile Beach—200 lives lost. Gold discovered at Southern Cross.
Australasian Conference in London. Australasian Naval Defence Force Act passed.
- 1888 N.S.W.—Centennial celebrations. Restrictive legislation against Chinese, imposing poll-tax of £100. Vic.—Second Victorian International Exhibition held at Melbourne. Qld.—Railway communication opened between Sydney and Brisbane.
Conference of Australian Ministers at Sydney to consider question of Chinese immigration. First meeting of the Australasian Association for the Advancement of Science held in Sydney.
- 1889 Qld.—Direct railway communication established between Brisbane and Adelaide. W.A.—Framing of new Constitution.
- 1890 W.A.—Responsible Government granted.
Meeting at Melbourne of Australasian Federation Conference.
- 1891 N.S.W.—Election to Legislative Assembly of 35 Labour members. Arrival of Australian Auxiliary Squadron. Cessation of assisted immigration. W.A.—Discovery of gold on the Murchison.
Federal Convention in Sydney: draft bill framed and adopted.
- 1892 W.A.—Discovery of gold by Messrs. Bayley and Ford at Coolgardie.
- 1893 N.S.W.—Departure by the *Royal Tar* of colonists for "New Australia."
Financial crisis, chiefly affecting the eastern States.
- 1895 N.S.W.—Free-trade tariff. Land and income taxes introduced.
Conference of Premiers at Hobart *re* Federation.
- 1896 N.S.W.—People's Federal Convention at Bathurst.
- 1897–8 Sessions of Federal Convention at Adelaide, Sydney, and Melbourne.
- 1898 N.S.W.—First surplus of wheat for export.
Draft Federal Constitution Bill submitted to electors in Victoria, New South Wales, South Australia, and Tasmania. Requisite statutory number of votes not obtained in New South Wales.
- 1899 First contingent of Australian troops sent to South Africa. Conference of Premiers in Melbourne to consider amendments to Federal Constitution Bill. Referendum—Bill accepted by New South Wales, Victoria, Queensland, South Australia, and Tasmania.
- 1900 N.S.W.—Old-age pensions instituted.
Contingents of naval troops sent to China. Commonwealth Constitution Act received Royal Assent, 9th July. Proclamation of Commonwealth signed, 17th September. Mr. (afterwards Sir) Edmund Barton formed first Federal Ministry.
- 1901 Vic.—Old-age Pensions instituted.
Proclamation of the Commonwealth at Sydney. First Federal Parliament opened at Melbourne by the Duke of Cornwall and York. Interstate free-trade established.
- 1902 N.S.W.—Disastrous explosion at Mount Kembla Colliery—95 lives lost. W.A.—Opening of pumping station at Northam in connexion with Goldfields water supply. Completion of Pacific Cable (all-British)
First Federal Tariff.
- 1903 Vic.—Railway Strike (Enginemen). W.A.—Coolgardie and Kalgoorlie Water Supply Scheme completed.
Inauguration of the Federal High Court.
- 1905 N.S.W.—Re-introduction of assisted immigration.
- 1906 Wireless telegraphy installed between Queenscliff, Vic., and Devonport, Tas.
Papua taken over by Commonwealth.

Year.

- 1907 N.S.W.—Telephone, Sydney to Melbourne, opened. Imperial Conference in London.
- 1908 Vic.—Railway accident at Braybrook Junction (Sunshine)—44 killed, 412 injured; compensation paid, £126,000. Canberra chosen as site of Federal Capital.
- 1909 Imperial Defence Conference in London—Commonwealth ordered two destroyers and one first-class cruiser for fleet unit. Visit of Lord Kitchener to report and advise on Commonwealth military defence. Loss of the *Waratah* with 300 passengers and crew.
- 1910 Vic.—Railway accident at Richmond—9 killed, over 400 injured; compensation paid, £129,000. Referendum on financial relations between the Commonwealth and the States. Penny postage. Arrival of the *Yarra* and *Parramatta*, first vessels of Australian navy. Australian Notes Act passed and first Commonwealth notes issued. Admiral Sir R. Henderson visited Australia to advise on naval defence.
- 1911 First Federal Census. Transfer of Northern Territory to Commonwealth. Introduction of compulsory military training. Launch of Commonwealth destroyer *Warrego* at Sydney. Establishment of penny postage to all parts of British Empire.
- 1912 Opening of Commonwealth Bank. First payments of Maternity Bonus. First sod turned at Port Augusta of Trans-Australian Railway (Port Augusta to Kalgoorlie). Gift of £1,000,000 to charities by Mrs. Walter Hall, Sydney, N.S.W.
- 1913 Arrival of battle cruiser *Australia*, and cruisers *Melbourne* and *Sydney*. Federal Capital named Canberra and foundation stone laid. Appointment of Interstate Commission.
- 1914 Visit of General Sir Ian Hamilton to report on military defence scheme. Double dissolution of Federal Parliament. Visit of British Association for the Advancement of Science. European War. Australian Navy transferred to Imperial Navy. Australian troops offered to, and accepted by Imperial Government. Captured vessels added to Australian fleet. Submarine AE1 lost at sea whilst on service in the vicinity of New Britain. German Pacific possessions seized by Australian expeditionary force (military and naval). German Cruiser *Emden* destroyed at North Cocos Island by H.M.A.S. *Sydney*.
- 1915 Opening of Broken Hill Proprietary's Ironworks at Newcastle, N.S.W. Navy Department created. Australian troops landed at Dardanelles on 25th April. Loss of Submarine AE2 in operations at the Dardanelles. Census taken of Wealth and Income, and of males in Australia between ages of 17 and 60. Australian troops withdrawn from Gallipoli on 19th December.
- 1916 Record wheat harvest (180,000,000 bushels). Australian mounted troops operate in Egypt; afterwards join Desert Mounted Column. Other Australian troops transferred to France. Visit of Rt. Hon. W. M. Hughes, P.C., K.C., Prime Minister, to Canada, Great Britain, and South Africa, and to troops in England and France. Acquisition of steamships by the Commonwealth. First Military Service Referendum.
- 1917 National Ministry formed. General strike. Kalgoorlie-Port Augusta railway completed. Second Military Service Referendum.
- 1918 Population of Australia reaches 5,000,000. Australian troops in France formed into an Army Corps, commanded by Lieut.-Gen. Sir John Monash. Cessation of hostilities and surrender of Germany. Repatriation Department created. Australia House (Strand, London) opened by the King. Deaths of Sir G. H. Reid and of Lord Forrest of Bunbury.
- 1918-1919 Visit to America and Europe of Rt. Hon. W. M. Hughes, P.C., K.C., Prime Minister, representative at Peace Conference.
- 1919 Epidemic of influenza. Aerial flight England to Australia by Capt. Sir Ross Smith and Lieut. Sir Keith Smith. Death of Hon. Alfred Deakin. Visit to Australia of General Sir W. Birdwood. Visit of Admiral Lord Jellicoe.
- 1920 Visit to Australia of H.R.H. the Prince of Wales. Aerial flight England to Australia by Lieuts. Pærer and McIntosh. Deaths of Rt. Hon. Sir Edmund Barton and of Rt. Hon. Sir Samuel Griffith.

Year.

- 1921 Visit to Imperial Conference of Rt. Hon. W. M. Hughes, P.C., K.C., Prime Minister. Second Commonwealth Census. Germany's Indemnity fixed (Australia's share approximately £63,000,000). Visit of Senator Pearce (Minister for Defence) to Disarmament Conference at Washington. Colliery disaster at Mt. Mulligan, Queensland—76 lives lost. Mandate given to Australia over Territory of New Guinea. First direct wireless press message, England to Australia.
- 1922 Economic Conference at Sydney. First lock on River Murray opened at Blanchetown, South Australia.
- 1923 Rt. Hon. S. M. Bruce, P.C., M.C., Prime Minister. Premiers' Conference, Melbourne. First sod, site of Federal Parliament House at Canberra, turned. Pan-Pacific Science Congress, Melbourne. Police dispute in Melbourne, with accompanying riots.
- 1923-24 Visit of Rt. Hon. S. M. Bruce, P.C., M.C., Prime Minister, to Imperial Conference, London, and afterwards to European and Gallipoli battlefields (September, 1923, to March, 1924).
- 1924 H.M.A.S. *Australia* sunk. Sea-plane flight round Australia by Wing-Commander Goble and Lieut. McIntyre. British Empire Exhibition at Wembley. First sale of land leases at Canberra. Visit of British cruiser squadron. Directorate of Commonwealth Bank appointed. Loan by British Government of £34,000,000 for Imperial migration.

OFFICIAL YEAR BOOK

OF THE

COMMONWEALTH OF AUSTRALIA, 1924,

AND EARLIER YEARS.

CHAPTER I.

**DISCOVERY, COLONIZATION, AND FEDERATION OF
AUSTRALIA.**

§ 1. Early Knowledge of Australia.

1. Introduction.—It is proposed to give here only a brief summary of the more important facts relating to the early history of Australian discovery. A more complete account of this subject, together with bibliographical references thereto, may be found in Year Book No. 1 (pp. 44 to 51), although this account must be modified somewhat in view of later investigations.

2. Early Tradition.—It would appear that there was an early Chaldean tradition as to the existence of an Austral land to the south of India. Rumours to that effect in course of time found their way to Europe, and were probably spread by voyagers from Indian seas, more especially by the Greek soldiers who accompanied Alexander the Great [B.C. 356–323] to India. References to this *Terra Australis* are found in the works of *Ælianus* [A.D. 205–234], *Manilius* [probably a contemporary of Augustus or Tiberius Cæsar], and *Ptolemy* [A.D. 107–161]. In some of the maps of the first period of the Middle Ages there is evidence which might warrant the supposition of the knowledge of the existence of a *Terra Australis*, while some idea of the Austral land appears in the maps and manuscripts of the fourteenth and fifteenth centuries. But much of the map-drawing in these early days was more or less fanciful, and there is no evidence definitely connecting this so-called *Terra Australis* with Australia.

3. Discovery of Australia.—(i) *General.* The Venetian traveller, *Marco Polo* [1254–1324], refers to a land called *Locac*, which through a misunderstanding of his meaning was long thought to be Australia. But *Marco Polo* knew nothing of any land to the south of Java, and in any case the description given of the so-called *Locac* could not possibly be applied to Australia, as the writer speaks of elephants, etc. On a *Mappamundi* in the British Museum, of not later date than 1489, there is a coast-line which has been considered to represent the west coast of Australia. Investigation by *Wood* and others proves this claim to be merely fanciful. *Martin Behaim's* globe, the

oldest known globe extant, constructed in 1492, also shows what purports to be a part of Australia's coast-line, and a globe discovered in Paris bears an inscription to the effect that the *Terra Australis* was discovered in 1499. These also have other countries located in impossible positions. The term *Terra Australis* was, however, also applied to the region now known as Tierra del Fuego, hence little weight can be attached to this reference.

In the Dauphin map [about 1530-1536] Jave la Grande has been supposed by some to represent Australia, but an inspection of the fanciful animals and other figures thereon lends no weight to the idea. As a matter of fact much of this map-drawing was simply an attempt to support the old notion that the land surface of the southern hemisphere must balance that of the northern.

(ii) *Arab Expeditions.* It has been stated that the Arabs had come to Australia long before the Portuguese, the Spanish, or the Dutch, but there is no evidence to support the statement.

(iii) *Spanish and Portuguese Expeditions.* The last decade of the fifteenth century and the commencement of the sixteenth saw numerous expeditions equipped in the ports of Spain and Portugal for the purpose of exploiting the new world. The Portuguese rounded the southernmost Cape of Africa, which became known as the Cape of Good Hope, and pushed eastward. The Spaniards, relying on the scientific conclusion that the world was spherical, attempted to get to the east by deliberately starting out west, Magalhaens by so doing reaching the Philippine Islands in 1521.

It may be mentioned that in 1606, Quiros, on reaching the island that has retained the name of Espiritu Santo (the largest island of the New Hebrides group) thought that he had come to this great land of the South, and therefore named the group *La Australia del Espiritu Santo*. Torres, who had been with him, passed through the strait which now bears his name, and proceeded to the Philippine Islands. This voyage marks the close of Spanish activity in the work of discovery in the South Seas.

(iv) *Discoveries by the Dutch.* With the decline of Portuguese and Spanish naval supremacy came the opportunity of the Dutch for discovery. Cornelius Wytfliet's map, of which there was an English edition, published at Louvain in 1597, indicates roughly the eastern and western coasts of Australia, as well as the Gulf of Carpentaria. The following often quoted passage, occurs in Wytfliet's "*Descriptionis Ptolemaicae Augmentum*." "*The Australis Terra is the most southern of all lands. It is separated from New Guinea, by a narrow strait. Its shores are hitherto but little known, since, after one voyage and another, that route has been deserted and seldom is the country visited, unless when sailors are driven there by storms. The Australis Terra begins at one or two degrees from the equator, and is maintained by some to be so great in extent that, if it were thoroughly explored, it would be regarded as a fifth part of the world.*"

The Dutch East India Company, in 1605, sent the *Duyfken* from Bantam to explore the Islands of New Guinea. During March in the following year the *Duyfken* coasted along the southern shores of New Guinea, and followed the west coast of Cape York Peninsula as far as Cape Keer-Weer (Turn again). Dirck Hartogs (on the plate in the Amsterdam Museum recording his voyage the name is written Dirck Hatichs), in the *Eendracht* in 1616, sailed along a considerable part of the west coast of the Continent. It may be mentioned that the route was not definitely selected, but that the navigator simply went further East than the usual course from the Cape to Java.

In 1618 the *Zeewolf* found land in lat. 20° 15' south, and in the following year Frederik Houtman discovered the reef off the west coast, now known as *Houtman's Abrolhos*.

In 1622 the Dutch vessel *Leeuwin* rounded the Cape at the south-west of the continent which now bears that name, and in 1623 the Dutch vessels *Pera* and *Arnhem*

discovered Arnhem Land, the peninsula on the western side of the Gulf of Carpentaria, which was so named in compliment to Peter Carpentier, Governor of the Dutch East India Company.

In 1627, Francis Thysz, commander of the *Gulde Zeepaerd*, with Pieter Nuyts, of the Dutch Council of Seventeen, on board, coasted along a portion of the shore of the Great Australian Bight. In 1628, De Witt, commander of the *Vianen*, discovered land on the north-west, viz., in about latitude 21° S. The *Batavia*, commanded by Francis Pelsart, was wrecked on the western coast of Australia in 1629. Pelsart was the first to carry to Europe an authentic account of the west coast of Australia, which, however, he described in the most unfavourable terms. The yachts *Amsterdam* and *Wesel*, under Gerrit Pool, visited the Gulf of Carpentaria in 1636.

Abel Janszoon Tasman, in command of two vessels, the *Heemskerck* and *Zeehaen*, set out in 1642 to ascertain the extent of the great southern continent. He named Van Diemen's Land, imagining it to be part of Australia proper, and sailing north-easterly discovered New Zealand. In his second voyage in 1644, Tasman visited the northern coast of Australia, sailing round the Gulf of Carpentaria and along the north-west coast as far down as the Tropic of Capricorn. The period of Dutch discoveries may be said to have ended with Tasman's second voyage, and, with the decline of Dutch maritime power, their interest in Australian discovery vanished. It may, however, be pointed out that William de Vlamingh landed at the mouth of the Swan River at the end of 1696.

4. Discoveries by the English.—The north-western shores of Australia were first visited by William Dampier, in the *Cygnet*, in 1688. In describing the country, Dampier stated that he was certain that it joined neither Asia, Africa, nor America. In 1699 he again visited Australia, in command of H.M.S. *Roebuck*, and on his return to England published an account in which a description is given of trees, flowers, birds, and reptiles observed, and of encounters with natives.

It was a question at the end of the seventeenth century whether Tasmania and New Zealand were parts of Australia, or whether they were separated from it, but themselves formed part of a great Antarctic Continent. Lieutenant James Cook's first voyage, though primarily undertaken for the purpose of observing the transit of Venus from Otaheite, had also for its objective to ascertain whether the unexplored part of the southern hemisphere were only an immense mass of water, or contained another continent. In command of H.M.S. *Endeavour*, a barque of 370 tons burthen, carrying about eighty-five persons, and accompanied by Sir Joseph Banks, Dr. Solander the naturalist, Green the astronomer, draughtsmen, and servants, Cook, after observing the transit of Venus at Otaheite, turned towards New Zealand, sighting that land on the 8th October, 1769, in the neighbourhood of Poverty Bay. Circumnavigating the North and South Islands, he proved that New Zealand was connected neither with the supposed Antarctic continent nor with Australia, and took formal possession thereof in the name of the British Crown. On the 20th April, 1770, at 6 a.m., Cook sighted the Australian mainland at a place he called Point Hicks, naming it after his first-lieutenant, who first saw it. Coasting northwards, Botany Bay was discovered on the 29th April, 1770. The *Endeavour* dropped anchor, and Cook landed on the following day. On the 2nd May, 1770, a seaman named Sutherland died and was taken ashore to be buried; he was probably the first British subject buried on Australian soil. Cook sailed along the coast in a northerly direction for nearly 1,300 miles until the 12th June, 1770, when the *Endeavour* was seriously damaged by striking a coral reef in the vicinity of Trinity Bay. Repairs occupied nearly two months, and the *Endeavour* then again set her course to the north, sailing through Torres Straits and anchoring in the Downs on the 14th June, 1771. In 1772 Cook was put in command of the ships *Resolution* and *Adventure*, with a view of ascertaining whether a great southern continent existed, and having satisfied himself that, even if it did, it lay so far to the south as to be useless for trade and settlement, he returned to England in 1774. Cook's last voyage was undertaken in 1776, and he met his death on the 14th February, 1779, by which date practically the whole coast of Australia had been explored. The only remaining discovery of importance to be made was the existence of a channel between Tasmania and Australia. This was discovered by Flinders and Bass in 1798.

§ 2. The Annexation of Australia.

1. **Annexation of Eastern Part of Australia, 1770.**—Although representatives of the nations mentioned in the previous section landed or claim to have landed on the shores of Australia on various occasions during the sixteenth and seventeenth centuries, it was not until the 23rd August, 1770, that the history of Australia was brought into definite political connexion with western civilization. It was on that date that Captain Cook took possession "of the whole eastern coast, from lat. 38° to this place, lat. 10½° S., in right of His Majesty King George the Third." Cook, however, proclaimed British sovereignty only over what are now the eastern parts of New South Wales and Queensland, and formal possession, on behalf of the British Crown, of the whole of the eastern part of the Australian Continent and Tasmania was not taken until the 26th January, 1788. It was on this last date that Captain Phillip's commission, first issued to him on the 12th October, 1786, and amplified on the 2nd April, 1787, was read to the people whom he had brought with him in the "First Fleet."

A full historical account of the period referred to may be found in the "Historical Records of New South Wales," vol. I., parts 1 and 2.

2. **Original Extent of New South Wales.**—The commission appointed Phillip "Captain-General and Governor-in-Chief in and over our territory called New South Wales, extending from the Northern Cape or extremity of the coast called Cape York, in the latitude of ten degrees thirty-seven minutes south, to the southern extremity of the said territory of New South Wales or South Cape, in the latitude of forty-three degrees thirty-nine minutes south, and of all the country inland westward as far as the one hundred and thirty-fifth degree of east longitude reckoning from the meridian of Greenwich, including all the islands adjacent in the Pacific Ocean within the latitudes aforesaid of ten degrees thirty-seven minutes south and forty-three degrees thirty-nine minutes south."

Although in November, 1769, Captain Cook had taken possession of the North Island of New Zealand, and in January, 1770, also of the South Island, it is a matter of doubt whether, at the time when Captain Phillip's commission was drawn up, New Zealand was considered as one of the "islands adjacent in the Pacific Ocean." The facts that under the Supreme Court Act (Imperial) of 1823, British residents in New Zealand were brought under the jurisdiction of the court at Sydney, while in 1839 there was a proposal on the part of the British Government to appoint a Consul in New Zealand, would leave this an open question, as nothing more than extra-territorial jurisdiction may have been intended. Various hoistings of flags notwithstanding, New Zealand does not appear to have unequivocally become British territory until 1840. In that year, on the 29th January, Captain Hobson arrived at the Bay of Islands. On the following day he read the commission, which extended the boundaries of the colony of New South Wales so as to embrace and comprehend the Islands of New Zealand. On the 5th February the Treaty of Waitangi, made with the native chiefs, was signed. Finally, on the 21st May, British sovereignty over the islands of New Zealand was explicitly proclaimed. From that date until the 3rd May, 1841, New Zealand was indubitably a dependency of New South Wales.

3. **Annexation of Western Australia, 1829.**—In June, 1825, Lieut.-General Sir R. Darling, then Governor of New South Wales, sent Major Lockyer, with a party numbering about 75, to found a settlement at King George III. Sound. The expedition sailed from Sydney on the 9th November, 1826, and landed at the Sound on the 26th December following, and hoisted the British flag. The settlement was at first governed from Sydney, but on the 7th March, 1831, governmental authority was moved to the Swan River Settlement, and the convict portion of the population transferred to Van Diemen's Land. In 1826 Captain James Stirling was sent in H.M.S. *Success* on special service relative to the necessity of immediately seizing upon a position on the western coast, near Swan River. In consequence of the favourable report made by him, the Imperial Government decided to establish a colony at Swan River. Captain Stirling was accordingly despatched as Lieutenant-Governor with a party of intending settlers in the *Parmelia*, and in the following month H.M.S. *Challenger*, under Captain Fremantle, was sent off from the Cape of Good Hope. On the 2nd May, 1829, Captain Fremantle

hoisted the British flag on the south head of the Swan River, and took possession of "all that part of New Holland which is not included within the territory of New South Wales," and in the following month the *Parmelia* arrived off Garden Island. Thus, before the middle of 1829, the whole territory now known as the Commonwealth of Australia had been constituted a dependency of the United Kingdom.

For a fuller account of the discovery and annexation of Western Australia reference may be made to the Western Australian Year Book, 1905, part I.

§ 3. The Creation of the Several Colonies.

1. **New South Wales as Original Colony.**—From what has been said, the mainland of Australia was, in Governor Phillip's commission of 1786, divided by the 135th meridian of east longitude into two parts. The earliest colonists believed that Van Diemen's Land—the present State of Tasmania—was actually joined to the mainland, and it was not till 1798 that the contrary was known. In that year, by sailing through Bass Straits, Flinders proved that it was an island. The territory of New South Wales, as originally constituted, and of New Zealand, which may be included, although Cook's annexation was not properly given effect to until 1840, was thus :—

	Square Miles.			
Australia, east of 135° longitude east	1,454,312
Van Diemen's Land	26,215
New Zealand	103,862
Total	1,584,389

The western part of Australia, not then annexed, comprised originally 1,494,054 square miles.

2. **Separation of Van Diemen's Land, 1825.**—In 1825, Van Diemen's Land, as Tasmania was then called, was politically separated from New South Wales, being constituted a separate colony on the 14th June of that year. This reduced the area of New South Wales and its territorial dependencies by 26,215 square miles, that is, to 1,558,174 square miles.

3. **Extension of New South Wales Westward, 1825.**—In 1825 the western or inland boundary of New South Wales was extended westward to the 129th meridian, thus increasing its area by 518,134 square miles, and making it, including New Zealand and excluding Tasmania, 2,076,308 square miles, or excluding also New Zealand, 1,972,446 square miles.

4. **Western Australia constituted a Colony, 1829.***—The territory annexed by Captain Fremantle in 1829, viz., "all that part of New Holland which is not included within the territory of New South Wales," extended eastward to the 129th meridian, and comprised 975,920 square miles. The constitution of this area into the Colony of Western Australia, now one of the six States of the Commonwealth, was the consequence of Fremantle's act. By it the annexation of the whole of the Continent of Australia by the British Crown was completed. The Australian colonies at this time were as indicated in the following table :—

Colony.	Date of Annexation.	Date of Creation.	Date of First Permanent Settlement.	Area Square Miles.
New South Wales (including New Zealand) ..	1770	1786	1788	2,076,308
Van Diemen's Land		1825	1803	26,215
Western Australia ..		1829	1829	975,920

* Although the foundation of Western Australia was made at Fremantle on 2nd June, 1829, the assertion of British dominion throughout the continent dates from the hoisting of the British flag at King George's Sound by Major Lockyer on 21st January, 1827.

5. **Creation of South Australia as a Province, 1836.**—On the 15th August, 1834, the Act 4 and 5 William IV., cap. 95, was passed, creating South Australia a "province," and towards the end of the year 1836 settlement took place. The first governor, Captain Hindmarsh, R.N., arrived at Holdfast Bay on the 28th December, 1836, and on the same day the new colony was officially proclaimed. The new colony embraced 309,850 square miles of territory, which, lying south of the 26th parallel of south latitude, and between the 141st and 132nd meridians of east longitude, was up to that time included within the territory of New South Wales. Thus the area of New South Wales and New Zealand was reduced to 1,766,458 square miles.

6. **Separation of New Zealand, 1840.**—New Zealand, nominally annexed by Captain Cook and formally declared by proclamation in 1840 as a dependency of New South Wales, was, by letters patent of the 16th November of that year, constituted a separate colony under the powers of the Act 3 and 4 Vic., cap. 62, of the 7th August, 1840. Proclamation of the separation was made on the 3rd May, 1841. The area of the colony is 103,862 square miles. This separation reduced the political territory of New South Wales to 1,662,596 square miles.

7. **The Colony of Northern Australia, 1847.**—In the year 1846, when the British Government was experiencing difficulty as regards the transportation of convicts, an attempt was made by Mr. Gladstone, then Colonial Secretary, to establish a purely penal colony, without free settlers (at least at the outset), to be called Northern Australia. This colony did not succeed in securing a permanent place on the map, though its intended metropolis was successfully established and still bears Mr. Gladstone's name. The new colony comprised such of the territories of the colony of New South Wales as lay to the northward of latitude 26° S. Sir Charles Fitzroy, then Governor of New South Wales, was by letters patent appointed Governor of Northern Australia, the actual administration being left in the hands of a Superintendent, who was to be implicitly guided by instruction from the Governor. At the same time Northern Australia was constituted a separate colony under its own Government, although the authority which the Secretary of State for the Colonies would otherwise exercise had been deputed in the first instance to the Governor of New South Wales. In the *London Gazette* of the 8th May, 1846, Colonel Barney, R.E., was appointed Lieutenant-Governor of Northern Australia, and on the 25th January, 1847, he reached Port Curtis, accompanied by other public officers of the new colony. On the 30th January the ceremony of swearing in the officials of Northern Australia was proceeded with, and on the same day the first *Government Gazette* of the new colony was issued in manuscript. This gazette contained a formal proclamation to the effect that all the land lying to the north of latitude 26° S. should thereafter be known as Northern Australia, and specified the names of the members of the Executive and Legislative Councils of the new colony. The headquarters of the Superintendent and other officials were established at Gladstone, although no other steps appear to have been taken towards securing a permanent settlement. In July, 1846, when Earl Grey succeeded Mr. Gladstone as Secretary of State for the Colonies, one of his first official steps was the complete reversal of the policy of his predecessor with respect to the founding of the new colony of Northern Australia, and by a despatch dated the 15th November, 1846, Sir Charles Fitzroy was informed that the letters patent under which the new colony was constituted had been revoked. This news was received at Gladstone on the 15th April, 1847, and on the 9th May following the settlement was broken up. The territories comprised in the Colony of Northern Australia then reverted to New South Wales.

8. **Separation of Victoria, 1851.**—In 1851, what was known as the "Port Phillip District" of New South Wales, was constituted the Colony of Victoria, "bounded on the north and north-east by a straight line drawn from Cape Howe to the nearest source of the River Murray, and thence by the course of that river to the eastern boundary of the colony of South Australia." The area of the new colony was 87,884 square miles, and its separate existence took effect from the 1st July, 1851, upon the issuing of the writs for the first election of elective members of the Legislative Council; this reduced the territory of New South Wales to 1,574,712 square miles.

9. **Separation of Queensland, 1859.**—The northern squatting districts of Moreton, Darling Downs, Burnett, Wide Bay, Maranoa, Leichhardt, and Port Curtis, together with the reputed county of Stanley, were granted an independent administration and formed

into a distinct colony under the name of Queensland, by letters patent dated the 6th June, 1859, although separation from New South Wales was not consummated until the 10th December of the same year, upon the assumption of office of the first Governor. The territory originally comprised in the new colony was described in the letters patent as being so much of the colony of New South Wales as lies northwards of a line commencing on the sea coast at Point Danger, in latitude about 28° 8' south, running westward along the Macpherson and Dividing Ranges and the Dumaresq River to the MacIntyre River, thence downward to the 29th parallel of south latitude, and following that parallel westerly to the 141st meridian of east longitude, which is the eastern boundary of South Australia, together with all the adjacent islands, their members, and appurtenances in the Pacific Ocean. In Year Book No. 1 it was stated that the western boundary of the new colony was defined by the letters patent of the 6th June, 1859, as being "the 141st meridian of longitude from the 29th to the 26th parallel, and thence the 138th meridian north to the Gulf of Carpentaria." Further investigations have however, shown that this statement is incorrect, and that the western boundary was not specifically defined. The western limits of the new colony were, however, defined by inference from the fact that its area comprised the territory to the northward of a line extending as far west as the 141st meridian of east longitude, i.e., the 141st meridian was the western boundary. The area of the new colony thus constituted was 554,300 square miles. By this separation the remaining territory of New South Wales was divided into two parts, one of 310,372 square miles, of which 309,432 square miles constitute the present State of New South Wales, and 940 square miles the Federal Capital Territory. The other area comprised 710,040 square miles, of which 116,200 square miles form now a part of Queensland, 523,620 square miles form the Northern Territory, and 70,220 square miles form now a part of South Australia.

10. The Colonies at the Close of 1859.—Since the separation of Queensland, no other creation of colonies has taken place in Australia, though the boundaries of New South Wales, Queensland, and South Australia were altered later. The dates of foundation of the Australasian colonies, and their areas at the close of 1859, were therefore as hereunder :—

AUSTRALASIAN COLONIES AS AT THE CLOSE OF 1859.

Colony.	Date of Annexation.	Date of Creation.	Date of First Permanent Settlement.	Area Square miles.
New South Wales	1770	1786	1788	1,020,412
Tasmania	1770	1825	1803	26,215
South Australia	1770	1834	1836	309,850
Victoria	1770	1851	1834	87,884
Queensland	1770	1859	1824	554,300
Western Australia	1829	1829	1829	975,920
New Zealand	1840	1841	1814	103,862(a)

(a) Including outlying and annexed islands.

11. The Changing Boundaries of the Colonies.—When, on the 15th August, 1834, the Imperial Government constituted the province of South Australia, there lay between its western boundary and the eastern boundary of Western Australia (as proclaimed by Fremantle in 1829) a strip of country south of the 26th parallel of south latitude, and between the 132nd and 129th meridians of east longitude, legally included within the territory of New South Wales. The area of this territory, frequently but improperly referred to as "No Man's Land," has been calculated to cover approximately 70,220 square miles. On the 10th October, 1861, by the authority of the Imperial Act 24 and 25 Vic., cap. 44, the western boundary of South Australia was extended so as to cover this strip, and to coincide with the eastern boundary of Western Australia—the 129th meridian. By letters patent dated the 13th March, 1861, forwarded by the Colonial Secretary to the Governor of Queensland on the 12th April, 1862, the area of Queensland was increased by the annexation of "so much of the colony of New South Wales as lies

to the northward of the 26th parallel of south latitude, and between the 141st and 138th meridians of east longitude, together with all and every the adjacent islands, their members, and appurtenances, in the Gulf of Carpentaria." The area of South Australia was therefore increased by 70,220 square miles, and became 380,070 square miles, while the area of Queensland increased by 116,200 square miles, became 670,500 square miles. Nearly two years after the accession of territory, viz., on the 6th July, 1863, the Northern Territory, containing 523,620 square miles—also formerly a part of New South Wales—was, by letters patent, brought under the jurisdiction of South Australia, which therefore controlled an area of 903,690 square miles; whilst that of New South Wales was diminished by these additions to South Australia, and by the separation of the colonies of New Zealand, Victoria and Queensland, till its area became only 310,372 square miles. The territories of Tasmania, Western Australia, and the three other separated colonies with the exception of some minor islands added to Queensland, remain as originally fixed.

12. **The Colonies in 1900.**—From what has been said in the previous sub-section it will be seen that the immense area generally known as Australasia had by 1863 been divided into seven distinct colonies, the combined areas of which amounted to 3,079,332 square miles.

§ 4. Establishment of the Commonwealth of Australia.

1. **General.**—On the 1st January, 1901, the colonies mentioned, with the exception of New Zealand, were federated under the name of the "Commonwealth of Australia," the designation of "Colonies"—excepting in the case of the Northern Territory, to which the designation "Territory" is applied—being at the same time changed into that of "States." The total area of the Commonwealth of Australia is, therefore, 2,974,581 square miles. The dates of creation and the areas of its component parts, as determined on the final adjustment of their boundaries, are shown in the following table:—

THE COMMONWEALTH OF AUSTRALIA.—AREA, ETC., OF COMPONENT PARTS.

State.	Year of Formation into Separate Colony.	Present Area in Square Miles.	State.	Year of Formation into Separate Colony.	Present Area in Square Miles.
New South Wales(a)	1786	310,372(a)	Tasmania ..	1825	26,215
Victoria ..	1851	87,884	Northern Territory	1863	523,620
Queensland ..	1859	670,500			
South Australia ..	1834	380,070	(b) Area of the Commonwealth ..	..	2,974,581
Western Australia	1829	975,920			

(a) On the 1st January, 1911, the Federal Capital Territory embracing an area of 940 square miles was taken over by the Commonwealth from the State of New South Wales, the area of that State therefore is now 309,432 square miles.

(b) The present Dominion of New Zealand was constituted a separate colony in 1841. The addition of its area, 103,862 square miles, to the total shown in the table above, gives a total for Australasia of 3,078,443 square miles as referred to in 12 *ante*.

2. **Transfer of the Northern Territory to the Commonwealth.**—On the 7th December, 1907, the Commonwealth and the State of South Australia entered into an agreement for the surrender to and acceptance by the Commonwealth of the Northern Territory, subject to approval by the Parliaments of the Commonwealth and the State. This approval was given by the South Australian Parliament under the Northern Territory Surrender Act 1907 (assented to on the 14th May, 1908), and by the Commonwealth Parliament under the Northern Territory Acceptance Act 1910 (assented to on the 16th November, 1910). The Territory accordingly was transferred to the Commonwealth by proclamation on the 1st January, 1911.

3. **Transfer of the Federal Capital Territory to the Commonwealth.**—On the 18th October, 1909, the Commonwealth and the State of New South Wales entered into an

agreement for the surrender to and acceptance by the Commonwealth of an area of 912 square miles as the seat of Government of the Commonwealth. In December, 1909, Acts were passed by the Commonwealth and New South Wales Parliaments approving the agreement, and on the 5th December, 1910, a proclamation was issued vesting the Territory in the Commonwealth on and from the 1st January, 1911. By the Jervis Bay Territory Acceptance Act 1915, an area of 28 square miles at Jervis Bay, surrendered by New South Wales according to an agreement made in 1913, was accepted by the Commonwealth.

4. **Transfer of British New Guinea or Papua.**—Under the administration of the Commonwealth, but not included in it, is British New Guinea or *Papua*, finally annexed by the British Government in 1884. This territory was for a number of years administered by the Queensland Government, but was transferred to the Commonwealth by proclamation on the 1st September, 1906, under the authority of the Papua Act (Commonwealth) of 16th November, 1905. The area of Papua is about 90,540 square miles.

5. **Transfer of Norfolk Island.**—Although administered for many years by the Government of New South Wales, this island was, until 1st July, 1914, a separate Crown colony. On that date it was taken over by the Federal Parliament as a territory of the Commonwealth.

§ 5. The Exploration of Australia.

1. **Introduction.**—A fairly complete, though brief, account of the Exploration of Australia was given in Year Book No. 2 (pp. 20 to 39). It is proposed to give here only a brief summary of the more important facts relating to the subject.

2. **Eastern Australia.**—(i) *General.* The first steps towards the exploration of New South Wales were taken by Captain Phillip and his officers, who, during 1788 and the years immediately following, made a number of excursions in the neighbourhood of Port Jackson, to Broken Bay, and along the Hawkesbury and Nepean Rivers.

(ii) *French Voyages of Exploration, 1788 to 1802.* Towards the close of the 18th century the French, who were supposed to covet territory in Australia, sent out several exploring expeditions. In 1788 two vessels under the command of Lapérouse put into Botany Bay to refit. In 1792 the French Admiral D'Entrecasteaux was in Australian waters with two vessels and discovered and named several places on the Tasmanian coasts. In 1800 an expedition, sent out by the French Republic, examined parts of the coasts of Van Diemen's Land and South Australia. It was chiefly in consequence of rumours to the effect that the French intended to establish a colony in Australia, that steps were taken by the British to form settlements at various places on the Australian coasts.

(iii) *Bass and Flinders, 1796 to 1803.* In 1796 and 1797 Bass and Flinders explored the coast in a southerly direction from Port Jackson as far as Western Port. In 1798 Bass, accompanied by Flinders and eight seamen, circumnavigated the island of Tasmania, thus proving the existence of the strait which now bears his name. In 1801 Flinders again came to Australia in command of H.M.S. *Investigator*, which was the first vessel to completely circumnavigate the Australian continent.

(iv) *Discovery of Port Phillip, 1802.* On the 5th January, 1802, Lieutenant Murray, who had been sent out to trace the coast between Point Schanck and Cape Otway, sighted the entrance to Port Phillip, which he did not, however, enter, owing to stress of weather, until the 15th February. Shortly afterwards Flinders entered Port Phillip, and in 1803 Charles Robbins explored the Yarra for some miles above the present site of Melbourne.

(v) *The Blue Mountains Crossed, 1813.* In 1813 Gregory Blaxland succeeded in effecting a passage over the Blue Mountains, which had previously proved an inaccessible barrier to all attempts to extend the infant colony in a westerly direction. G. W. Evans, following on Blaxland's tracks, soon penetrated further inland and discovered and named the Fish, Campbell, Macquarie, and Lachlan Rivers. In 1817 and 1818

John Oxley, Allan Cunningham, Charles Frazer, and others explored a considerable part of the Lachlan and Macquarie Rivers, and discovered and named the Castlereagh River, the Arbutnot Range, the Liverpool Plains, the Hastings River, and Port Macquarie.

(vi) *Hamilton Hume, 1814 to 1824.* In 1816 Hamilton Hume, who two years previously had explored the country round Berrima, discovered and named the Goulburn Plains and Lake Bathurst. In 1824, accompanied by William Hilton Hovell, Hume, starting off from Lake George, reached the Murrumbidgee and sighted the Snowy Mountains. On the 16th December, 1824, he reached the Southern Ocean at the spot where Geelong now stands. This expedition had a great and immediate influence on the extension of Australian settlement.

(vii) *Allan Cunningham, 1817 to 1829.* In 1823 Cunningham, who had accompanied Oxley in 1817, discovered and named Pandora's Pass, leading to the Liverpool Plains from the Upper Hunter, and in 1827 he discovered the Darling Downs.

(viii) *Charles Sturt, 1828 to 1830.* In 1828 the Darling River was discovered by Sturt, who in the following year explored the Murray River, tracing it to its mouth at Lake Alexandrina in Encounter Bay. Sturt thus connected his overland journey with the discoveries of Flinders and other coastal explorers. In the meantime discovery on the Australian coasts had been followed up by Captains Wickham and Stokes in H.M.S. *Beagle*.

(ix) *Sir Thomas Mitchell, 1831 to 1846.* In 1831 Mitchell discovered the lower courses of the Peel (Nami), Gwydir, and Dumaresq Rivers, and identified the Upper Darling. Two years later he explored the country between the Bogan and Macquarie Rivers, and in 1835 he traced the Darling 300 miles down from Bourke. In 1836 he ascended the Murray and Loddon Rivers and discovered the Avoca, the Campaspe, and the Wimmera Rivers, reaching the coast near Cape Northumberland. On his return journey Mitchell visited Portland Bay, where he found the Henty family established, and ascending Mount Macedon, he saw and identified Port Phillip. In 1845 and 1846 Mitchell again set out, accompanied by Edmund B. Kennedy, and explored the Narran, Balonne, and Culgoa Rivers. Ascending the Balonne, he turned westward, exploring the Maranoa and the Warrego. Proceeding to the north he then discovered the Belyando and the Barcoo Rivers.

(x) *McMillan, Strzelecki, Leslie and Russell, 1839 to 1841.* In the meantime, other explorers had been on the field and had made numerous discoveries. In 1839 and 1840 Angus McMillan discovered and named Lake Victoria, the Nicholson, Mitchell, and Macallister Rivers, and explored the country as far as the Latrobe River. In 1840 Strzelecki discovered Mount Kosciusko, the Latrobe River, and Lake King. In 1840 and 1841 Patrick Leslie and Stuart Russell explored the Condamine River.

(xi) *Leichhardt, 1844 to 1845.* In 1844 and 1845 Ludwig Leichhardt made a number of discoveries. Leaving the Condamine River he discovered the Dawson River, Peak Downs, the Planet and Comet Rivers, and Zamia Creek. Later on he found and named the Mackenzie, Isaacs, Suttor, Burdekin, Lynd, Mitchell, Leichhardt, Nicholson, McArthur and Roper Rivers, and after exploring part of the coast of the Gulf of Carpentaria, reached the settlement of Victoria at Port Essington. In 1848 Leichhardt equipped another expedition and set out from the Cogoon. No sure clue as to his fate or as to the fate of his companions has ever come to light.

(xii) *Kennedy, 1847 to 1848.* In 1848 Edmund Kennedy, who had accompanied Mitchell in 1845 and 1846, and who had further explored the Barcoo and Victoria Rivers in 1847, attempted to make his way up the eastern coast of Cape York Peninsula. After great hardships he reached the Escape River, where he was murdered by the blacks.

(xiii) *A. C. Gregory, 1846 to 1858.* A. C. Gregory's earliest explorations were in Western Australia, where in 1846 he discovered Lake Moore. In 1855 Gregory explored the Fitzmaurice and Victoria Rivers and Sturt's Creek. He examined the Gilbert River and its tributaries, and made his way in a westerly direction across to Brisbane. In 1858 Gregory explored the districts near the Barcoo and Thompson Rivers, Strzelecki's Creek, and Lake Blanche.

(xiv) *Later Exploration of the North East, 1859 to 1872.* After Kennedy's ill-fated expedition the main portion of Eastern Australia was fairly well known. Certain parts

of what is now Queensland, however, still remained unexplored. These were examined by G. E. Dalrymple in 1859, by Frederick Walker in 1862, by Frank and Alex Jardine in 1864, and by William Hann in 1872. Hann discovered the Tate, Walsh, Palmer and Normanby Rivers. This expedition practically completed the exploration of Eastern Australia. The gold discoveries on the Palmer River, in Queensland, following soon after, led to a considerable amount of minor exploration being carried out by prospectors whose labours are, however, unrecorded.

3. Central Australia.—(i) *General.* In 1836 Colonel Light surveyed the shores of St. Vincent's Gulf, and selected the site for the settlement at Adelaide. In the same year Mitchell had succeeded in travelling overland from the Darling to Cape Northumberland, and the settlers found little difficulty in driving stock from various parts of New South Wales to the new country. A great deal of minor exploration was done by these pioneers, the first of whom to lead the way across to the Port Phillip settlement with sheep in 1837 was Charles Bonney. In 1838 the overlanding of stock was extended to Adelaide by Joseph Hawdon.

(ii) *Eyre, 1838 to 1841.* In 1841 Edward John Eyre, who had previously discovered Lake Hindmarsh, and had explored the country to the north-east of Spencer's Gulf, succeeded, after great hardship, in reaching Albany overland from Adelaide. After this expedition settlers soon spread in a northerly direction from Adelaide, and various expeditions in search of grazing country were carried out by these pioneers.

(iii) *Sturt's Later Explorations, 1844 to 1845.* In 1844 Charles Sturt, whose explorations in Eastern Australia have already been referred to, set out from the Darling on an expedition to reach the centre of the continent. He reached his furthest point in latitude 24° 30' S. and longitude 137° 58' E. in September, 1845, and, after enduring great privations, was compelled to retreat through want of water.

(iv) *Stuart, 1858 to 1862.* John MacDouall Stuart accompanied Captain Sturt on his last expedition. After minor explorations in the vicinity of Lake Eyre, Stuart made an unsuccessful attempt to cross the continent from south to north in 1860. After discovering the Frew, Fincke, and Stevenson Creeks, Chambers Pillar, and the McDonnell Range, he camped at the centre of Australia on the 22nd April, 1860. In the following year Stuart was placed in command of an expedition equipped by the South Australian Government, and succeeded in crossing the continent, reaching the sea at Chambers Bay on the 25th July, 1862.

(v) *Burke and Wills Expedition, 1860 to 1861.* In 1860 Robert O'Hara Burke and William Wills led an expedition northward from Melbourne to explore the country as far as the Gulf of Carpentaria. Through their arrangements having miscarried, both Burke and Wills perished in the bush, after having crossed the continent and returned to their depot at Fort Wills, only to find it deserted. Various relief expeditions were sent out, and among them may be specially mentioned Howitt's Relief Expedition, the Queensland Relief Expeditions under Walker and Landsborough, and the South Australian Relief Party under McKinlay. Though the actual work of exploration carried out by the Burke and Wills expedition was unimportant, the discoveries made by the relief parties sent out were of great value in opening up Central Australia.

(vi) *Giles, 1872 to 1876.* In 1872 Ernest Giles discovered Lake Amadeus and Mount Olga. In that year and in the following one he made unsuccessful attempts to force his way through the desert to the settlements of Western Australia. In 1875 Giles, accompanied by W. H. Tietkins, set out from Beltana, and after making his way in the vicinity of latitude 30° S., to the settled districts of Western Australia, returned to the Peake telegraph station by way of the Murchison, Gascoyne, and Ashburton Rivers.

(vii) *Later Explorations.* Other explorations in Central Australia were carried out by Major Warburton (1873), W. C. Grosse (1873), W. O. Hodgkinson (1875), Nathaniel Buchanan (1878), Frank Scarr (1878), Ernest Favenc (1878-83), H. V. Barclay (1877), A. Johns and P. Saunders (1876), David Lindsay (1883), H. Stockdale (1884), W. H. Tietkins (1889), A. Searcy (1882-96), and Hubbe (1896).

4. Western Australia.—(i) *General.* In 1791 George Vancouver, in command of H.M.S. *Discovery*, reached and named King George's Sound. On the 26th December, 1826, Major Lockyer, with a detachment of soldiers, landed at King George's Sound to form a

settlement, under instructions from Sir Ralph Darling, then Governor of New South Wales. The settlement was established in order to forestall the French, who, it was rumoured, intended to occupy the harbour. Early in 1827 Captain James Stirling and Charles Frazer examined and reported upon the Swan River district with a view to forming a settlement there. In 1829 Captain Fremantle landed at the mouth of the Swan River and took possession of the country. A month later Stirling arrived with the first settlers.

(ii) *Early Explorers.* In November, 1829, Alexander Collie and Lieutenant Preston explored the coast between Cockburn Sound and Géographie Bay, and in the following month Dr. T. B. Wilson, R.N., discovered and named the Denmark River.

In 1830 John Septimus Roe explored the country in the neighbourhood of Cape Naturaliste and between the Collie and Preston Rivers, and in 1835 examined the districts between the headwaters of the Kalgan and Hay Rivers. In 1836 and 1839 Roe explored the country north and east of Perth, and in 1848 traced the course of the Pallinup River for some distance.

Other early explorers in the West were Ensign R. Dale (1830), Captain Bannister (1831), W. K. Shenton (1831), J. G. Bussell (1831), Lieutenant Preston (1831), Alexander Collie (1832), F. Whitfield (1833) A. Hillman (1833), G. F. Moore (1834), and Lieutenant Bunbury (1836).

(iii) *Grey, 1837 to 1839.* In 1837 Captain (afterwards Sir) George Grey discovered and traced the Glenelg River. In 1839 he explored the country between the Williams and Leschenault Rivers, and later succeeded in making his way along the coast from the mouth of the Gascoyne River to Perth.

(iv) *F. T. Gregory, 1857 to 1861.* In 1857 and 1858 Frank T. Gregory examined the upper reaches of the Murchison River and reached the Gascoyne River, which he descended to its mouth, whence he made his way to Perth. In 1861 Gregory explored the north-western districts, discovering the Fortescue, Ashburton, Shaw, De Grey, and Oakover Rivers.

(v) *John Forrest, 1869 to 1883.* In 1869, John Forrest (later Lord Forrest of Bunbury) penetrated to the east some distance past Mount Margaret and discovered Lake Barlee. In 1870 he succeeded in making his way from Perth to Adelaide via Esperance Bay, Israelite Bay, and Eucla, and in 1874, accompanied by his brother Alexander and four others, he crossed from Geraldton to the overland telegraph line near Peake Station. In 1883 Forrest explored a large portion of the Kimberley Division, Cambridge Gulf, and the lower part of the Ord River.

(vi) *Alexander Forrest, 1871 to 1879.* In 1879 Alexander Forrest, who had previously accompanied his brother on two expeditions, made his way from the De Grey River to the Daly Waters Station on the overland telegraph line, via Beagle Bay, the King Leopold Range, Nicholson Plains, and the Ord and Victoria Rivers.

(vii) *L. A. Wells, 1892 to 1897.* In 1892 Wells examined practically the whole of the still unexplored districts between Giles' track of 1876 and Forrest's route of 1874, and in 1896 and 1897 he explored the country between the East Murchison and Fitzroy Rivers.

(viii) *Later Explorations in Western Australia.* During the latter part of the 19th century various expeditions were sent out to explore those parts of Western Australia (chiefly in the north-western districts) which still remained unknown. Those whose names are connected with the later exploration of Western Australia are—David Carnegie (1896-7) who discovered a practical stock route between Kimberley and Coolgardie; W. Carr-Boyd (1883-96), who explored the country near the Rawlinson Ranges and made several excursions between the southern goldfields of Western Australia and the South Australian border; H. F. Johnston, G. R. Turner, and E. T. Hardman (1884), who discovered the Mary and Elvire Rivers; F. S. Brockman, Charles Crossland, Gibb Maitland, and Dr. F. M. House (1901), who explored the extreme north of the State; F. H. Hann (1896-1907), who made various excursions in the north-west and between Laverton and Oodnadatta.

(ix) *Other Explorers.* Other explorers whose names are connected with the exploration of Western Australia are :—George Eliot, who, in 1839, explored the country between the Williams and Leschenault; William Nairne Clark, who, in 1841, discovered immense

jarrah and karri forests in the south-west; R. H. Bland (1842); H. Landor (1842); Lieutenant Helpmann (1844); Captain H. M. Denham (1858); B. D. Clarkson, C. E. and A. Dempster, and C. Harper (1861); C. C. Hunt and Ridley (1863); R. J. and T. C. Sholl (1865); A. McRae (1866); Philip Saunders and Adam Johns (1876); H. Stockdale (1884); H. Anstey (1887); F. Newman and W. P. Goddard (1890); J. H. Rowe (1895); C. A. Burrows and A. Mason (1896); Hugh Russell (1897); and John Muir (1901).

§ 6. The Constitutions of the States.

1. **Introduction.**—The subject of "General Government" is dealt with in some detail in Chapter III., but it has been thought desirable here to give a brief statement of the constitutional history of Australia, with a view of showing how the present Constitutions of the States have been built up.

2. **Early Constitutional History.**—(i) *General.* The earliest statute relating to Australia was passed in the year 1784, for the purpose of empowering the King in Council to appoint places in Australia to which convicts might be transported. By an Order in Council dated the 6th of December, 1786, His Majesty's "territory of New South Wales, situated on the east part of New Holland," was appointed such a place. Captain Phillip, who was appointed the first Governor and Vice-Admiral of the territory, was empowered by his commission and letters patent to make ordinances for the good government of the settlement. By an Act passed in 1787, authority was given for the establishment of a court of criminal jurisdiction in Sydney. In the early days of settlement, the Governor's power was almost absolute, and his rule virtually despotic, tempered by his own discretion and by the knowledge that he was responsible to the Imperial authorities for any maladministration. By Acts passed in 1819, 1821, and 1822, the Governor was given limited powers to impose local taxation in the shape of Customs duties on spirits, tobacco, and other goods imported into the Colony.

(ii) *The First Constitutional Charter.* In 1823 an Act was passed authorizing the creation of a Council, consisting of from five to seven persons charged with certain legislative powers of a limited character. This was the first constitutional charter of Australia, and was later improved and amended by an Act passed in 1828, and applied both to New South Wales and to Van Diemen's Land, which had been politically separated in 1825.

(iii) *First Representative Legislature.* In 1842 an important measure was passed by the Imperial Government, establishing for the first time in Australia, a Legislature partly, but not wholly, representative in character. It was enacted that there should be within the colony of New South Wales a Legislative Council, to consist of thirty-six members, twelve of whom were to be nominated by the Sovereign and twenty-four elected by the inhabitants of the colony. The Act contained provisions defining the legislative functions of the Council, and regulated the giving or withholding of the Royal assent to Bills passed by the Council. This Act did not grant responsible government to New South Wales; the heads of the Departments and other public officers continued to hold their offices at the pleasure of the Crown, as represented by the Governor. The new Council was opened by Sir George Gipps, on the 1st August, 1843.

(iv) *The Australian Colonies Government Act 1850.* The next important Act relating to representative government in Australia is the Australian Colonies Government Act, passed in 1850. The two main objects of this Act were (a) the separation of the Port Phillip District from New South Wales, and (b) the establishment of an improved system of government in all the Australian colonies. For New South Wales, for the separated Victoria, for Van Diemen's Land, and for South Australia, similar Legislatures were prescribed. The general provisions of the Act provided that the existing Legislature in New South Wales should decide the number of members of which a new Council was to consist in that colony, and should perform the same task for Victoria. On the issue of the writs for the first election in Victoria, separation was to be deemed complete. One-third of the number of members of the Council in each Colony was to be nominated by the Crown. The existing Legislatures in Van Diemen's Land and South Australia were to decide as to the number of members in the new Council in each, but they were

not to exceed twenty-four. Power was given to the Governor and Legislative Council in each colony to alter the qualifications of electors and members as fixed by the Act, or to establish, instead of the Legislative Council, a Council and a House of Representatives, or other separate Legislative Houses, to be appointed or elected by such persons and in such manner as should be determined, and to vest in such Houses the powers and functions of the old Council. The powers and functions of the Councils under this Act were as follows:—(a) To make laws for the peace, order, and good government of the colony; (b) to impose taxation, including the imposition of Customs duties; and (c) to appropriate to the public service the whole of the public revenue arising from taxes, duties, rates, and imposts. The restrictions on the powers and functions of the Councils were as follows:—(a) That no such law should be repugnant to the law of England, (b) that no such law should interfere with the sale and appropriation of Crown lands, (c) that no Customs duties of a differential character should be imposed, and (d) that it should not be lawful for the Council to pass any Bill appropriating to the public service any sum of money for any purpose unless the Governor should have previously recommended that provision for such appropriation be made.

3. **New South Wales.**—After the Act just referred to had been proclaimed, an Electoral Bill for New South Wales was passed, increasing the number of members of the Council from thirty-six to fifty-four, of whom thirty-six were to be elective and eighteen nominee members. The extraordinary increase in the wealth and prosperity of the colony owing to the discovery of gold soon imparted new and unforeseen features to its political and social conditions. In 1851 a remonstrance was despatched by the Legislative Council of New South Wales to the Secretary of State for the Colonies, in which objection was taken to the form of Constitution which the Imperial authorities proposed to grant under the Act of 1850, on the grounds (a) that it did not place the control of all revenue and taxation entirely in the hands of the Colonial Legislature, (b) that all offices of trust and emolument should be filled by the Governor and Executive Council, unfettered by instructions from the Secretary of State for the Colonies, and (c) that plenary powers of legislation should be conferred on the Colonial Legislature. In 1852 the Secretary of State for the Colonies, in a despatch to the Governor of New South Wales, promised to give effect to the wishes of the Legislative Council, and suggested that the Legislative Council should proceed to frame a Constitution resembling that of Canada and based on a bi-cameral Legislature. A select committee of the Council was accordingly appointed to draft a Constitution, and as a result of the deliberations of this body the new Constitution was, on the 21st December, 1853, adopted by the Council and transmitted to the Secretary of State for the Colonies. As it contained provisions in excess of the powers conferred by the Act of 1850, the Bill could not receive the Royal assent unless it was passed by the Imperial Parliament. With some amendments this was accomplished, and it became law on the 16th July, 1855. It is now known as the New South Wales Constitution Act 1855, and under its provisions a fully responsible system of government was granted. The entire management and control of Crown lands was conferred on the New South Wales Parliament, while the provisions of former Acts respecting the allowance and disallowance of Bills were preserved. Subject to the provisions of the Act, power to make laws amending the Constitution was given to the New South Wales Parliament. The first Parliament, under the new Constitution, was opened by Sir William T. Denison, on the 22nd May, 1856. The Constitution was amended by Acts passed in 1857, 1884 and 1890, these Acts being repealed and consolidated by the Constitution Amendment Act of 1902. The last amending Act was passed in 1916.

4. **Victoria.**—After the proclamation of the Australian Colonies Government Act of 1850, the old Legislative Council of New South Wales met on the 28th March, 1851, for the purpose of making electoral and judicial arrangements required to bring the new Act into force in Victoria. Two Acts were passed specially concerning Victoria. The first provided for the continuation of the powers and functions of all public officers resident within the Port Phillip District until removed or reappointed by the Government of Victoria. The other Act provided that the Legislative Council of Victoria should consist of thirty members, ten nominee and twenty elective. On the 1st July, 1851, writs for the election of the elective members of the new Legislative Council of Victoria were issued, and separation became complete. On the 15th July, Mr. La Trobe was appointed the

first Lieutenant-Governor of the colony. The powers and functions of the new Council were, under the Act of 1850, similar to those of the reorganized Legislative Council of New South Wales. The next important stage in the constitutional history of Victoria was that which was consummated by the attainment of a fully responsible system of government. In 1853 a despatch, similar to that received by the Governor of New South Wales (see above), was received by the Lieutenant-Governor of Victoria from the Secretary of State for the Colonies. A Constitution was drafted by a committee of the Legislative Council, and it was embodied in a Bill which was passed and reserved for the Queen's assent on 28th March, 1854. This Bill contained clauses similar to those of the New South Wales Bill relating to the assent of the Governor to bills and the Sovereign's power to disallow the same; to the sale and appropriation of Crown lands; and to the amendment of the Constitution by the Victorian Parliament. As the new Constitution contained provisions beyond those authorized by the Act of 1850, a special Enabling Act was necessary. The Bill was passed and assented to on the 16th July, 1855, and the new Constitution was proclaimed on the 23rd November following. Several amendments have since been made, chiefly with reference to the term of membership and the qualifications of members and electors. The last amending Act was passed in 1922.

5. **Queensland.**—As part of New South Wales, the Moreton Bay District enjoyed the benefits of responsible government under the Constitution Act of 1855. For electoral purposes the district was, in 1856, divided into eight electorates, returning nine members to the Legislative Assembly of New South Wales.

By an Act passed in 1842 the Queen was empowered to erect into a separate colony any part of the territory of New South Wales lying to the northward of 26° south latitude, which was altered by the Australian Colonies Government Act 1850 to 30° south latitude. By the New South Wales Constitution Act 1855 the power previously granted to alter the northern boundary of New South Wales was distinctly preserved, and Her Majesty was authorized, by letters patent, to erect into a separate colony any territory which might be so separated. It was further enacted that Her Majesty, either by such letters patent, or by Order in Council, might make provision for the government of any such new colony, and for the establishment of a Legislature therein, in manner as nearly resembling the form of government and legislature established in New South Wales as the circumstances of the new colony would permit. The separation was effected by letters patent dated the 6th June, 1859, and the Constitution of the new colony was embodied in an Order in Council of the same date.

The Order in Council provided that there should be within the colony of Queensland a Legislative Council and a Legislative Assembly, with the advice and consent of which Her Majesty should have the power to make laws for the peace, welfare, and good government of the colony in all cases whatsoever. The powers and functions granted to this Legislature were substantially the same as those granted to New South Wales and Victoria under their respective Constitution Acts, and similar restrictions were imposed. The first Parliament under the new Constitution was convened on the 29th May, 1859. There have been several amendments of the Constitution, the latest having been made in 1922.

6. **South Australia.**—The creation of South Australia as a Province has already been referred to above. In the exercise of the provisions of the Act by which the Province was created, a governor, a judge, seven commissioners, and other officials were appointed. The Governor, with the concurrence of the Chief Justice, the Colonial Secretary, and the Advocate-General, or two of them, was authorized to make laws and impose taxes. The control of the Crown lands was placed in the hands of the Commissioners. In 1841, the settlement being involved in financial difficulties, a loan was advanced by the British Government. Under an Act passed in 1842 the system of government was remodelled; the colonization commissioners were abolished, and the Province became a Crown colony. The Queen was empowered to constitute a nominated Legislative Council, consisting of the Governor and seven other persons resident in the colony, with power to make laws for the good government thereof. This system of government continued in force until the inauguration of a new scheme under the provisions of the Australian Colonies Government Act 1850, referred to above.

In 1853, the Legislative Council of South Australia, in pursuance of the powers conferred by the Act of 1850, passed a Bill to establish a bi-cameral Legislature for South

Australia. The Royal assent was, however, refused on the grounds that the Bill contained a provision limiting the right of the Crown in respect of the disallowance of Bills, which provision was in excess of the powers conferred by the Act of 1850. In 1855 a new Legislative Council, partly elective and partly nominee, having been duly constituted, a second Bill, based on the Tasmanian Constitution Bill, to create a bi-cameral Legislature, was passed and duly received the Royal assent in 1856. This Act, known as the South Australian Constitution Act 1856, confers no legislative powers except by reference to the Act of 1850. In order to ascertain the principal legislative powers and functions of the Parliament of South Australia reference must therefore be made to the Australian Colonies Government Act 1850, defining the legislative powers and functions of the Council for which it was substituted. The first session of the new Parliament commenced on the 22nd April, 1857, during the Governorship of Sir Richard Graves McDonnell.

The legislative powers of the South Australian Parliament have been considerably enlarged by several Imperial Acts. In 1855 an Act was passed authorizing the Legislature of each of the Australian colonies to sell, dispose of, and legislate with reference to Crown lands in the colony. In 1865 the Colonial Laws Validity Act removed the common law restriction which prevented colonial legislators from passing any law repugnant to the law of England. In 1873 the prohibition contained in the Australian Colonies Government Act 1850 was, by the Australian Colonies Duties Act, abolished so far as intercolonial duties were concerned. There have been a large number of amendments to the Constitution, the latest having been passed in 1921.

7. **Western Australia.**—In 1829 the first Imperial Act relating to the Government of Western Australia was passed. By that Act, the King in Council was empowered to make and constitute, and to authorize any three or more persons resident within the settlements to make and constitute laws, institutions, and ordinances for the peace, order, and good government of the settlements in Western Australia. By an Order in Council dated the 1st November, 1830, the first Executive Council was constituted, while in the following year a Legislative Council, which consisted at first solely of members of the Executive Council, was formed. This system of government remained unaltered for many years, though the number of members of both Councils was increased from time to time. In August, 1870, the nominee Legislative Council was dissolved, and writs were issued (under the Australian Colonies Government Act 1850, the provisions of which did not apply to Western Australia until that colony was able to defray its own expenses) for the election of a Council to consist of twelve elected and six nominated members. These numbers were again increased from time to time until the last Legislative Council under the old form of government, which expired on the 21st October, 1890, consisted of twenty-six members, of whom four were official members, five were nominees of the Crown, and seventeen were elected by the different constituencies. As far back as 1873 a movement was commenced in Western Australia for responsible government as it existed in the eastern colonies. In 1889 the Legislative Council was dissolved, and a general election took place, the principal question being the introduction of responsible government. A resolution in favour of the change was passed by the new Council without dissent, and a Constitution providing for the creation of a bi-cameral Legislature was accordingly drafted. In August, 1890, an enabling Bill received the Royal assent, and responsible government was proclaimed in the colony on the 21st October, 1890. Under this Act the Legislative Council was a nominative chamber, subject to the provision that after the expiration of six years, or as soon as the colony acquired a population of 60,000, the Council should be constituted by election. The first Parliament under the new Constitution met on the 30th December, 1890. On the 18th July, 1893, the population of the colony being then over 60,000, the Legislature of Western Australia passed an Act to amend the Constitution, abolishing the nominee Council, and substituting one elected by the qualified inhabitants of the colony. The present Constitution of Western Australia differs but little from those of the other States of the Commonwealth. It has been amended by various Acts, the last of which was passed in 1921.

8. **Tasmania.**—Under an Order in Council dated the 14th June, 1825, and made in pursuance of the provisions of an Act passed in 1823, Van Diemen's Land, as it was officially known until the year 1853, was separated from New South Wales and was

proclaimed a separate colony. A Lieutenant-Governor was appointed, and an Executive and a Legislative Council were called into existence, the latter being on the same model as that introduced into the other colonies at the earliest stages of their constitutional progress. It was not until the Imperial Act of 1850 was passed, that a system of representative government was introduced into Tasmania. A Constitution Bill was drafted and passed by the Legislative Council, and was assented to and proclaimed on the 24th October, 1856.

The Constitution of South Australia was based upon that of Tasmania, and the remarks made above with reference to the Constitution of the former State apply equally to the Constitution of the latter State.

The first Parliament under the new Constitution was opened on the 2nd December, 1856. The Constitution has been amended by various Acts, the latest of which was passed in 1921.

9. Reservation of Bills.—The reservation of Bills passed by the Legislature of any State was formerly dealt with both by the instructions given to the State Governors and by various State Constitution Acts. The Australian States Constitution Act 1907 amended the law with respect to the reservation of Bills, and provided that the following Bills must be reserved for the signification of His Majesty's pleasure thereon, viz. :—Any Bill which (a) alters the Constitution of the Legislature of the State, or (b) affects the salary of the Governor of the State, or (c) is, under any Act of the Legislature of the State passed after the passing of the Australian States Constitution Act 1907, or under any provision contained in the Bill itself, required to be reserved. The Act does not, however, affect the reservation of Bills in accordance with any instructions given to the Governor of a State by His Majesty.

§ 7. The Federal Movement in Australia.

1. Early Stages in the Federal Movement.—A summary is given in Year Book No. 1 (pp. 17 to 21) of the "Federal Movement in Australia" from its earliest inception to its consummation. Limits of space will permit of the insertion of a synopsis only in the present issue.

Notwithstanding that, owing to the circumstances of their growth, the initial tendency in Australia was naturally towards the individualistic evolution of the several settlements, from the earliest period there was a clear recognition of the importance of intercolonial reciprocity. Governor Fitzroy, in 1846, and Earl Grey, in 1847, saw that there were questions which affected "Australia collectively, the regulation of which in some uniform manner, and by some single authority, may be essential to the welfare of them all," and a "central legislative authority for the whole of the Australian colonies" was actually contemplated. Even so far back as 1849, a Privy Council Committee recommended a uniform tariff, and the constituting of one of the Governors as Governor-General of Australia, Sir Charles Fitzroy being actually appointed as "Governor-General of all Her Majesty's Australian Possessions." The office, however, was nominal rather than actual, and expired in 1861. Dr. Lang's idea of "a great federation of all the colonies of Australia" was put forward in 1852, and a Victorian committee in 1853 advocated the value of a General Assembly of Delegates for the whole of Australia.

The need of union was urged by the *Sydney Morning Herald* in 1854, and, although Wentworth sought in 1857 to bring about the creation of a Federal Assembly, a draft "Enabling Bill" proved unacceptable to Her Majesty's Government. In the same year Mr. (afterwards Sir) Charles Gavan Duffy secured the appointment of a select committee of the Victorian Legislative Assembly to consider the necessity of a federal union of the Australasian colonies. The need for such a union was unanimously affirmed, the general opinion being that it should not be longer delayed. In the same year, a select committee of the New South Wales Legislative Council also considered this question, fully recognizing that antagonisms and jealousies were likely to arise through delay.

Union was in a fair way toward realization when the advent of the Cowper Administration destroyed all chance of attaining it, owing to the antagonism of Mr. Cowper and

Mr. (afterwards Sir) James Martin. South Australia, also in the same year, and Queensland in 1859, were both unfavorable to the federal scheme. A second attempt by Mr. Duffy to bring about a conference in 1860 failed also.

Tariff differences, however, compelled political attention to the matter, and in 1862 correspondence was opened up by South Australia regarding tariff uniformity. By means of intercolonial conferences between 1863 and 1880 some degree of uniformity in legislation and a measure of concerted administration were realized. In March, 1867, Mr. (afterwards Sir) Henry Parkes expressed himself as follows :—" . . . The time has arrived when these colonies should be united by some federal bond. . . . There are questions projecting themselves . . . which cannot be dealt with by . . . individual Governments. . . . I believe it will lead to a permanent federal understanding." A Bill passed, however, was shelved by the Home Government.

2. **The Federal Council.**—The conference of November-December, 1880, and January, 1881, recommended the creation of a Federal Council, believing that the time had not arrived for a Federal Constitution with a Federal Parliament. Until 1883, however, every effort proved abortive, but in November of that year a convention, at which the seven colonies and Fiji were represented, met in Sydney. A Bill to establish a Federal Council for Australasia, drafted by Mr. (later Sir) Samuel Griffith, was, after some modification by a committee of the convention, adopted. In July and August, 1884, the Crown was addressed, praying for the enactment of a Federal Council Act. New South Wales and New Zealand, however, held aloof, the view of Sir Henry Parkes being that a "council" would impede the way for a sure and solid federation. The Bill introduced by the Earl of Derby in the House of Lords on the 23rd April, 1885, became law on the 14th August as "The Federal Council of Australasia Act 1885." The Council's career however, soon showed that it could not hope to be effective, and it met for the last time in January, 1899.

3. **Formative Stages of the Federal Movement.**—As early as 1878 the necessity for federal defence was vividly brought into Australian consciousness, and arrangements for naval protection were entered into with the Imperial Government. These were ratified by the Australasian Naval Force Act. Queensland, however, did not come into line until 1891.

Early in 1889, Sir Henry Parkes had confidentially suggested to Mr. Duncan Gillies the necessity for a Federal Parliament and Executive. Unable to accept the latter's suggestion that New South Wales should give its adhesion to the Federal Council, the former statesman urged the institution of "a National Convention for the purpose of devising and reporting upon an adequate scheme of Federal Government." This led to the Melbourne Conference of 6th February, 1890. It was at the banquet on this occasion that, in proposing "A United Australasia," Mr. James Service pointed out that the tariff question was "a lion in the path," which federationists must either slay, or by which they must be slain; in the reply to which Sir Henry Parkes made use of his historic phrase, *the crimson thread of kinship runs through us all*. Certain elements of doubt being expressed as to the motives underlying the movement, Sir Henry Parkes said :—"We desire to enter upon this work of Federation without making any condition to the advantage of ourselves, without any stipulation whatever, with a perfect preparedness to leave the proposed convention free to devise its own scheme, and, if a central Parliament comes into existence, with a perfect reliance upon its justice, upon its wisdom, and upon its honour . . . I think . . . an overwhelming majority of my countrymen . . . will approve of the grand step . . . uniting all the colonies under one form of beneficent government, and under one national flag."

The first National Australasian Convention, under Sir Henry Parkes' presidency, was convened on the 2nd March, 1891, all the colonies and New Zealand being represented. The Bill then drafted was considered by the Parliaments of New South Wales, Victoria, South Australia, and Tasmania, but not by those of Queensland, Western Australia, and New Zealand, and though the parliamentary process of dealing with the matter failed, federal sentiment was strengthening. The collapse of the "land boom" had made apparent how intimately the interests of each colony were related; and the dangers of disunion became impressively obvious. The Australian Natives' Association took up the federal cause with enthusiasm, Federation leagues were established, the issues were widely and intelligently discussed. The unification scheme of Sir George Dibbs helped to make the issue a real one.

At the Conference of Premiers at Hobart on the 29th January, 1895, it was agreed that federation "was the great and pressing question of Australian politics," and that "the framing of a Federal Constitution" was an urgent duty. The resuscitation of the whole matter led to the passing of Enabling Acts. In New South Wales, the Act received the Royal assent on the 23rd December, 1895; South Australia anticipated this by three days; the Tasmanian Bill was passed on the 10th January, 1896, the Victorian on the 7th March, 1896; Western Australia fell into line on the 27th October. The "People's Federal Convention," held at Bathurst, N.S.W., in November, 1896, gave a considerable impulse to the movement; to wait longer for Queensland was considered unnecessary, and the 4th March, 1897, was fixed as the date for the election of federal representatives for New South Wales, Victoria, South Australia, and Tasmania. Western Australia followed suit, and on the 22nd March the representatives met at Adelaide.

The discussions made it evident that the federal point of view had advanced considerably. Constitutional, Finance, and Judiciary Committees were appointed, and a Bill drafted. This, reported to the Convention on the 22nd April, was adopted on the following day, and the Convention adjourned till September. The Parliaments of New South Wales, Victoria, South Australia, Tasmania, and Western Australia discussed the question before the Sydney Session of the Convention, which opened on the 2nd September, 1897. The business of the Convention involved the general reconsideration of the whole Bill, and the consideration of no less than 286 suggested amendments. This work gave a definite character to that of the Melbourne Session of 1898, extending from the 20th January to the 17th March, the necessity of reaching a final decision giving to its deliberations corresponding weight.

4. **Votes on the Question of Federation.**—Eleven weeks after this last convention, the first popular vote was taken on Federation in New South Wales, Victoria, South Australia, and Tasmania. Though the decision was overwhelming in favour of Federation in three of the States, and there was a distinct majority in its favour in New South Wales, the majority was legally insufficient. On the 22nd January, 1899, the Premiers of the six colonies met at Melbourne in a conference initiated by the Right Honourable G. H. Reid, P.C., and seven amendments were made in the Bill. This step virtually effected the solution of the few outstanding difficulties which could in any way be regarded as fundamental.

On the occasion of the second popular vote, Queensland also joined in, and the general majority in favour of Federation was more than doubled, that for New South Wales itself having been more than quadrupled when compared with the first vote. The following table shows the two results :—

VOTES FOR AND AGAINST FEDERATION.

Votes.		N.S.W.	Victoria.	Sth. Aust.	Tas.	Qld.	TOTALS.
1st Vote	{ For Federation ..	71,595	100,520	35,800	11,797	—	219,712
	{ Against „ ..	66,228	22,099	17,320	2,716	—	108,363
	{ Majority ..	5,367	78,421	18,480	9,081	—	111,349
2nd Vote	{ For Federation ..	107,420	152,653	65,990	13,437	38,488	377,988
	{ Against „ ..	82,741	9,805	17,053	791	30,996	141,386
	{ Majority ..	24,679	142,848	48,937	12,646	7,492	236,602

5. **Enactment of the Constitution.**—The Secretary of State for the Colonies (the Right Honourable Joseph Chamberlain) expressed the hope on the 22nd December, 1899, that a delegation of the federating colonies would visit England on the occasion of the submission of the Commonwealth Bill to the Imperial Parliament. The delegation consisted of Mr. (later Sir) Edmund Barton (N.S.W.), Mr. Alfred Deakin (Vic.), Mr. C. C. Kingston (S.A.), Sir P. O. Fysh (Tas.), and later Mr. S. H. Parker was appointed delegate for Western Australia, and Mr. W. P. Reeves for New Zealand. After discussion as to whether there should be some modification in the Bill, it was introduced into the House of Commons

on the 14th May ; the second reading was moved on the 21st of the same month ; the discussion in committee commenced on the 18th June ; and the Royal assent was given on the 9th July, 1900.

On the 31st July a referendum in Western Australia on the question of federating gave the result :—For, 44,800 ; against, 19,691 ; that is to say, a majority of 25,109 in favour of union. On the 21st August both Houses of Parliament in that State passed addresses praying that it might be included as an original State of the Commonwealth.

On the 17th September, 1900, Her Majesty Queen Victoria signed the proclamation declaring that on and after the first day of January, 1901, the people of New South Wales, Victoria, South Australia, Queensland, Tasmania, and Western Australia should be united in a Federal Commonwealth, under the name of the Commonwealth of Australia.

§ 8. Creation of the Commonwealth.

1. **The Constitution Act**—The Commonwealth of Australia Constitution Act, 63 and 64 Vict., Chapter 12, namely, “An Act to constitute the Commonwealth of Australia,” as amended by the Constitution Alteration (Senate Elections) Act 1906, and the Constitution Alteration (State Debts) Act 1909 is given *in extenso* hereunder.

THE COMMONWEALTH OF AUSTRALIA CONSTITUTION ACT, 63 & 64 VICT., CHAPTER 12.

An Act to constitute the Commonwealth of Australia. [9th July, 1900.]

WHEREAS the people of New South Wales, Victoria, South Australia, Queensland, and Tasmania, humbly relying on the blessing of Almighty God, have agreed to unite in one indissoluble Federal Commonwealth under the Crown of the United Kingdom of Great Britain and Ireland, and under the Constitution hereby established :

And whereas it is expedient to provide for the admission into the Commonwealth of other Australasian Colonies and possessions of the Queen :

Be it therefore enacted by the Queen's Most Excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled, and by the authority of the same, as follows :—

1. This Act may be cited as the Commonwealth of Australia Constitution Act.

2. The provisions of this Act referring to the Queen shall extend to Her Majesty's heirs and successors in the sovereignty of the United Kingdom.

3. It shall be lawful for the Queen, with the advice of the Privy Council, to declare by proclamation that, on and after a day therein appointed, not being later than one year after the passing of this Act, the people of New South Wales, Victoria, South Australia, Queensland, and Tasmania, and also, if Her Majesty is satisfied that the people of Western Australia have agreed thereto, of Western Australia, shall be united in a Federal Commonwealth under the name of the Commonwealth of Australia. But the Queen may, at any time after the proclamation, appoint a Governor-General for the Commonwealth.

4. The Commonwealth shall be established, and the Constitution of the Commonwealth shall take effect, on and after the day so appointed. But the Parliaments of the several colonies may at any time after the passing of this Act make any such laws, to come into operation on the day so appointed, as they might have made if the Constitution had taken effect at the passing of this Act.

5. This Act, and all laws made by the Parliament of the Commonwealth under the Constitution, shall be binding on the courts, judges, and people of every State and of every part of the Commonwealth, notwithstanding anything in the laws of any State : and the laws of the Commonwealth shall be in force on all British ships, the Queen's ships of war excepted, whose first port of clearance and whose port of destination are in the Commonwealth.

6. “The Commonwealth” shall mean the Commonwealth of Australia as established under this Act.

“The States” shall mean such of the colonies of New South Wales, New Zealand, Queensland, Tasmania, Victoria, Western Australia, and South Australia, including the

northern territory of South Australia, as for the time being are parts of the Commonwealth, and such colonies or territories as may be admitted into or established by the Commonwealth as States: and each of such parts of the Commonwealth shall be called "a State."

"Original States" shall mean such States as are parts of the Commonwealth at its establishment.

7. The Federal Council of Australasia Act, 1885, is hereby repealed, but so as not to affect any laws passed by the Federal Council of Australasia and in force at the establishment of the Commonwealth.

Any such law may be repealed as to any State by the Parliament of the Commonwealth, or as to any colony not being a State by the Parliament thereof.

8. After the passing of this Act the Colonial Boundaries Act 1895 shall not apply to any colony which becomes a State of the Commonwealth; but the Commonwealth shall be taken to be a self-governing colony for the purposes of that Act.

9. The Constitution of the Commonwealth shall be as follows:—

THE CONSTITUTION.

This Constitution is divided as follows:—

- Chapter I.—The Parliament:
 - Part I.—General:
 - Part II.—The Senate:
 - Part III.—The House of Representatives:
 - Part IV.—Both Houses of the Parliament:
 - Part V.—Powers of the Parliament:
- Chapter II.—The Executive Government:
- Chapter III.—The Judicature:
- Chapter IV.—Finance and Trade:
- Chapter V.—The States:
- Chapter VI.—New States:
- Chapter VII.—Miscellaneous:
- Chapter VIII.—Alteration of the Constitution.
- The Schedule.

CHAPTER I.—THE PARLIAMENT.

PART I.—GENERAL.

1. The legislative power of the Commonwealth shall be vested in a Federal Parliament which shall consist of the Queen, a Senate, and a House of Representatives, and which is hereinafter called "The Parliament," or "The Parliament of the Commonwealth."

2. A Governor-General appointed by the Queen shall be Her Majesty's representative in the Commonwealth, and shall have and may exercise in the Commonwealth during the Queen's pleasure, but subject to this Constitution, such powers and functions of the Queen as Her Majesty may be pleased to assign to him.

3. There shall be payable to the Queen out of the Consolidated Revenue Fund of the Commonwealth, for the salary of the Governor-General, an annual sum which, until the Parliament otherwise provides, shall be ten thousand pounds.

The salary of a Governor-General shall not be altered during his continuance in office

4. The provisions of this Constitution relating to the Governor-General extend and apply to the Governor-General for the time being, or such person as the Queen may appoint to administer the Government of the Commonwealth; but no such person shall be entitled to receive any salary from the Commonwealth in respect of any other office during his administration of the Government of the Commonwealth.

5. The Governor-General may appoint such times for holding the sessions of the Parliament as he thinks fit, and may also from time to time, by Proclamation or otherwise, prorogue the Parliament, and may in like manner dissolve the House of Representatives.

After any general election the Parliament shall be summoned to meet not later than thirty days after the day appointed for the return of the writs.

The Parliament shall be summoned to meet not later than six months after the establishment of the Commonwealth.

6. There shall be a session of the Parliament once at least in every year, so that twelve months shall not intervene between the last sitting of the Parliament in one session and its first sitting in the next session.

PART II.—THE SENATE.

7. The Senate shall be composed of senators for each State, directly chosen by the people of the State, voting, until the Parliament otherwise provides, as one electorate.

But until the Parliament of the Commonwealth otherwise provides, the Parliament of the State of Queensland, if that State be an Original State, may make laws dividing the State into divisions and determining the number of senators to be chosen for each division, and in the absence of such provision the State shall be one electorate.

Until the Parliament otherwise provides there shall be six senators for each Original State. The Parliament may make laws increasing or diminishing the number of senators for each State, but so that equal representation of the several Original States shall be maintained and that no Original State shall have less than six senators.

The senators shall be chosen for a term of six years, and the names of the senators chosen for each State shall be certified by the Governor to the Governor-General.

8. The qualification of electors of senators shall be in each State that which is prescribed by this Constitution, or by the Parliament, as the qualification for electors of members of the House of Representatives; but in the choosing of senators each elector shall vote only once.

9. The Parliament of the Commonwealth may make laws prescribing the method of choosing senators, but so that the method shall be uniform for all the States. Subject to any such law, the Parliament of each State may make laws prescribing the method of choosing the senators for that State.

The Parliament of a State may make laws for determining the times and places of elections of senators for the State.

10. Until the Parliament otherwise provides, but subject to this Constitution, the laws in force in each State, for the time being, relating to elections for the more numerous House of the Parliament of the State shall, as nearly as practicable, apply to elections of senators for the State.

11. The Senate may proceed to the despatch of business, notwithstanding the failure of any State to provide for its representation in the Senate.

12. The Governor of any State may cause writs to be issued for elections of senators for the State. In case of the dissolution of the Senate the writs shall be issued within ten days from the proclamation of such dissolution.

13. As soon as may be after the Senate first meets, and after each first meeting of the Senate following a dissolution thereof, the Senate shall divide the senators chosen for each State into two classes, as nearly equal in number as practicable; and the places of the senators of the first class shall become vacant at the expiration of [the third year] *three years*,* and the places of those of the second class at the expiration of [the sixth year] *six years*,* from the beginning of their term of service; and afterwards the places of senators shall become vacant at the expiration of six years from the beginning of their term of service.

The election to fill vacant places shall be made [in the year at the expiration of which] *within one year before** the places are to become vacant.

For the purpose of this section the term of service of a senator shall be taken to begin on the first day of [January] *July** following the day of his election, except in the cases of the first election and of the election next after any dissolution of the Senate, when it shall be taken to begin on the first day of [January] *July** preceding the day of his election.

* As amended by section 2 of the Constitution Alteration (Senate Elections) 1906. The words in square brackets have been repealed; amendments are shown in italics.

14. Whenever the number of senators for a State is increased or diminished, the Parliament of the Commonwealth may make such provision for the vacating of the places of senators for the State as it deems necessary to maintain regularity in the rotation.

15. If the place of a senator becomes vacant before the expiration of his term of service, the Houses of Parliament of the State for which he was chosen shall, sitting and voting together, choose a person to hold the place until the expiration of the term, or until the election of a successor as hereinafter provided, whichever first happens. But if the Houses of Parliament of the State are not in session at the time when the vacancy is notified, the Governor of the State, with the advice of the Executive Council thereof, may appoint a person to hold the place until the expiration of fourteen days after the beginning of the next session of the Parliament of the State, or until the election of a successor, whichever first happens.

At the next general election of members of the House of Representatives, or at the next election of senators for the State, whichever first happens, a successor shall, if the term has not then expired, be chosen to hold the place from the date of his election until the expiration of the term.

The name of any senator so chosen or appointed shall be certified by the Governor of the State to the Governor-General.

16. The qualifications of a senator shall be the same as those of a member of the House of Representatives.

17. The Senate shall, before proceeding to the despatch of any other business, choose a senator to be the President of the Senate; and as often as the office of President becomes vacant the Senate shall again choose a senator to be the President.

The President shall cease to hold his office if he ceases to be a senator. He may be removed from office by a vote of the Senate, or he may resign his office or his seat by writing addressed to the Governor-General.

18. Before or during any absence of the President, the Senate may choose a senator to perform his duties in his absence.

19. A senator may, by writing addressed to the President, or to the Governor-General if there is no President or if the President is absent from the Commonwealth, resign his place, which thereupon shall become vacant.

20. The place of a senator shall become vacant if for two consecutive months of any session of the Parliament he, without the permission of the Senate, fails to attend the Senate.

21. Whenever a vacancy happens in the Senate, the President, or if there is no President or if the President is absent from the Commonwealth, the Governor-General, shall notify the same to the Governor of the State in the representation of which the vacancy has happened.

22. Until the Parliament otherwise provides, the presence of at least one-third of the whole number of the senators shall be necessary to constitute a meeting of the Senate for the exercise of its powers.

23. Questions arising in the Senate shall be determined by a majority of votes, and each senator shall have one vote. The President shall in all cases be entitled to a vote; and when the votes are equal the question shall pass in the negative.

PART III.—THE HOUSE OF REPRESENTATIVES.

24. The House of Representatives shall be composed of members directly chosen by the people of the Commonwealth, and the number of such members shall be, as nearly as practicable, twice the number of the senators.

The number of members chosen in the several States shall be in proportion to the respective numbers of their people, and shall, until the Parliament otherwise provides, be determined, whenever necessary, in the following manner:—

- (i) A quota shall be ascertained by dividing the number of the people of the Commonwealth, as shown by the latest statistics of the Commonwealth, by twice the number of the senators:

- (ii) The number of members to be chosen in each State shall be determined by dividing the number of the people of the State, as shown by the latest statistics of the Commonwealth, by the quota; and if on such division there is a remainder greater than one-half of the quota, one more member shall be chosen in the State.

But notwithstanding anything in this section, five members at least shall be chosen in each Original State.

25. For the purposes of the last section, if by the law of any State all persons of any race are disqualified from voting at elections for the more numerous House of the Parliament of the State, then, in reckoning the number of the people of the State or of the Commonwealth, persons of that race resident in that State shall not be counted.

26. Notwithstanding anything in section twenty-four, the number of members to be chosen in each State at the first election shall be as follows :—

New South Wales	..	23	South Australia	..	6
Victoria	..	20	Tasmania	..	5
Queensland	..	8			

Provided that if Western Australia is an Original State, the numbers shall be as follows :—

New South Wales	..	26	South Australia	..	7
Victoria	..	23	Western Australia	..	5
Queensland	..	9	Tasmania	..	5

27. Subject to this Constitution, the Parliament may make laws for increasing or diminishing the number of the members of the House of Representatives.

28. Every House of Representatives shall continue for three years from the first meeting of the House, and no longer, but may be sooner dissolved by the Governor-General.

29. Until the Parliament of the Commonwealth otherwise provides, the Parliament of any State may make laws for determining the divisions in each State for which members of the House of Representatives may be chosen, and the number of members to be chosen for each division. A division shall not be formed out of parts of different States.

In the absence of other provision, each State shall be one electorate.

30. Until the Parliament otherwise provides, the qualification of electors of members of the House of Representatives shall be in each State that which is prescribed by the law of the State as the qualification of electors of the more numerous House of Parliament of the State; but in the choosing of members each elector shall vote only once.*

31. Until the Parliament otherwise provides, but subject to this Constitution, the laws in force in each State for the time being relating to elections for the more numerous House of the Parliament of the State shall, as nearly as practicable, apply to elections in the State of members of the House of Representatives.

32. The Governor-General in Council may cause writs to be issued for general elections of members of the House of Representatives.

After the first general election, the writs shall be issued within ten days from the expiry of a House of Representatives or from the proclamation of a dissolution thereof.

33. Whenever a vacancy happens in the House of Representatives, the Speaker shall issue his writ for the election of a new member, or if there is no Speaker or if he is absent from the Commonwealth the Governor-General in Council may issue the writ.

34. Until the Parliament otherwise provides, the qualifications of a member of the House of Representatives shall be as follows :—

- (i) He must be of the full age of twenty-one years, and must be an elector entitled to vote at the election of members of the House of Representatives, or a person qualified to become such elector, and must have been for three years at the least a resident within the limits of the Commonwealth as existing at the time when he is chosen :

* The franchise qualification was determined by the Commonwealth Franchise Act 1902.

- (ii) He must be a subject of the Queen, either natural-born or for at least five years naturalized under a law of the United Kingdom, or of a Colony which has become or becomes a State, or of the Commonwealth, or of a State.

35. The House of Representatives shall, before proceeding to the despatch of any other business, choose a member to be the Speaker of the House, and as often as the office of Speaker becomes vacant the House shall again choose a member to be the Speaker.

The Speaker shall cease to hold his office if he ceases to be a member. He may be removed from office by a vote of the House, or he may resign his office or his seat by writing addressed to the Governor-General.

36. Before or during any absence of the Speaker, the House of Representatives may choose a member to perform his duties in his absence.

37. A member may by writing addressed to the Speaker, or to the Governor-General if there is no Speaker or if the Speaker is absent from the Commonwealth, resign his place, which thereupon shall become vacant.

38. The place of a member shall become vacant if for two consecutive months of any session of the Parliament he, without the permission of the House, fails to attend the House.

39. Until the Parliament otherwise provides, the presence of at least one-third of the whole number of the members of the House of Representatives shall be necessary to constitute a meeting of the House for the exercise of its powers.

40. Questions arising in the House of Representatives shall be determined by a majority of votes other than that of the Speaker. The Speaker shall not vote unless the numbers are equal, and then he shall have a casting vote.

PART IV.—BOTH HOUSES OF THE PARLIAMENT.

41. No adult person who has or acquires a right to vote at elections for the more numerous House of the Parliament of a State shall, while the right continues, be prevented by any law of the Commonwealth from voting at elections for either House of the Parliament of the Commonwealth.

42. Every senator and every member of the House of Representatives shall before taking his seat make and subscribe before the Governor-General, or some person authorized by him, an oath or affirmation of allegiance in the form set forth in the schedule to this Constitution.

43. A member of either House of the Parliament shall be incapable of being chosen or of sitting as a member of the other House.

44. Any person who—

- (i) Is under any acknowledgment of allegiance, obedience, or adherence to a foreign power, or is a subject or a citizen or entitled to the rights or privileges of a subject or a citizen of a foreign power : or
- (ii) Is attainted of treason, or has been convicted and is under sentence, or subject to be sentenced, for any offence punishable under the law of the Commonwealth or of a State by imprisonment for one year or longer : or
- (iii) Is an undischarged bankrupt or insolvent : or
- (iv) Holds any office of profit under the Crown, or any pension payable during the pleasure of the Crown out of any of the revenues of the Commonwealth : or
- (v) Has any direct or indirect pecuniary interest in any agreement with the Public Service of the Commonwealth otherwise than as a member and in common with the other members of an incorporated company consisting of more than twenty-five persons :

shall be incapable of being chosen or of sitting as a senator or a member of the House of Representatives.

But sub-section iv. does not apply to the office of any of the Queen's Ministers of State for the Commonwealth, or of any of the Queen's Ministers for a State, or to the receipt of pay, half-pay, or a pension by any person as an officer or member of the Queen's

navy or army, or to the receipt of pay as an officer or member of the naval or military forces of the Commonwealth by any person whose services are not wholly employed by the Commonwealth.

45. If a senator or member of the House of Representatives—

- (i) Becomes subject to any of the disabilities mentioned in the last preceding section : or
- (ii) Takes the benefit, whether by assignment, composition, or otherwise, of any law relating to bankrupt or insolvent debtors : or
- (iii) Directly or indirectly takes or agrees to take any fee or honorarium for services rendered to the Commonwealth, or for services rendered in the Parliament to any person or State :

his place shall thereupon become vacant.

46. Until the Parliament otherwise provides, any person declared by this Constitution to be incapable of sitting as a senator or as a member of the House of Representatives shall, for every day on which he so sits, be liable to pay the sum of one hundred pounds to any person who sues for it in any court of competent jurisdiction.

47. Until the Parliament otherwise provides, any question respecting the qualification of a senator or of a member of the House of Representatives, or respecting a vacancy in either House of the Parliament, and any question of a disputed election to either House, shall be determined by the House in which the question arises.

48. Until the Parliament otherwise provides, each senator and each member of the House of Representatives shall receive an allowance of four hundred pounds a year, to be reckoned from the day on which he takes his seat.*

49. The powers, privileges, and immunities of the Senate and of the House of Representatives, and of the members and the committees of each House, shall be such as are declared by the Parliament, and until declared shall be those of the Commons House of Parliament of the United Kingdom, and of its members and committees, at the establishment of the Commonwealth.

50. Each House of the Parliament may make rules and orders with respect to—

- (i) The mode in which its powers, privileges, and immunities may be exercised and upheld :
- (ii) The order and conduct of its business and proceedings either separately or jointly with the other House.

PART V.—POWERS OF THE PARLIAMENT.†

51. The Parliament shall, subject to this Constitution, have power to make laws for the peace, order, and good government of the Commonwealth with respect to :—

- (i) Trade and commerce with other countries, and among the States :
- (ii) Taxation ; but so as not to discriminate between States or parts of States :
- (iii) Bounties on the production or export of goods, but so that such bounties shall be uniform throughout the Commonwealth :
- (iv) Borrowing money on the public credit of the Commonwealth :
- (v) Postal, telegraphic, telephonic, and other like services :
- (vi) The naval and military defence of the Commonwealth and of the several States, and the control of the forces to execute and maintain the laws of the Commonwealth :
- (vii) Lighthouses, lightships, beacons and buoys :
- (viii) Astronomical and meteorological observations :
- (ix) Quarantine :
- (x) Fisheries in Australian waters beyond territorial limits :
- (xi) Census and statistics :

* By the Parliamentary Allowances Act 1907, the amount of the allowance was increased to £600 a year; and by the Parliamentary Allowances Act 1920 to £1,000 a year. (The latter Act also apportioned special allowances to the President of the Senate; the Speaker of the House of Representatives; the Chairmen of Committees in both Houses; and the Opposition Leaders in both Houses.)

† Particulars of proposed laws which were submitted to referenda are given in Chapter III., General Government.

- (xii) Currency, coinage, and legal tender :
- (xiii) Banking, other than State banking ; also State banking extending beyond the limits of the State concerned, the incorporation of banks, and the issue of paper money :
- (xiv) Insurance, other than State insurance ; also State insurance extending beyond the limits of the State concerned :
- (xv) Weights and measures :
- (xvi) Bills of exchange and promissory notes :
- (xvii) Bankruptcy and insolvency :
- (xviii) Copyrights, patents of inventions and designs, and trade marks :
- (xix) Naturalization and aliens :
- (xx) Foreign corporations, and trading or financial corporations formed within the limits of the Commonwealth :
- (xxi) Marriage :
- (xxii) Divorce and matrimonial causes ; and in relation thereto, parental rights, and the custody and guardianship of infants :
- (xxiii) Invalid and old-age pensions :
- (xxiv) The service and execution throughout the Commonwealth of the civil and criminal process and the judgments of the courts of the States :
- (xxv) The recognition throughout the Commonwealth of the laws, the public Acts and records, and the judicial proceedings of the States :
- (xxvi) The people of any race, other than the aboriginal race in any State, for whom it is deemed necessary to make special laws :
- (xxvii) Immigration and emigration :
- (xxviii) The influx of criminals :
- (xxix) External affairs :
- (xxx) The relations of the Commonwealth with the islands of the Pacific :
- (xxxi) The acquisition of property on just terms from any State or person for any purpose in respect of which the Parliament has power to make laws :
- (xxxii) The control of railways with respect to transport for the naval and military purposes of the Commonwealth :
- (xxxiii) The acquisition, with the consent of a State, of any railways of the State on terms arranged between the Commonwealth and the State :
- (xxxiv) Railway construction and extension in any State with the consent of that State :
- (xxxv) Conciliation and arbitration for the prevention and settlement of industrial disputes extending beyond the limits of any one State :
- (xxxvi) Matters in respect of which this Constitution makes provision until the Parliament otherwise provides :
- (xxxvii) Matters referred to the Parliament of the Commonwealth by the Parliament or Parliaments of any State or States, but so that the law shall extend only to States by whose Parliaments the matter is referred, or which afterwards adopt the law :
- (xxxviii) The exercise within the Commonwealth, at the request or with the concurrence of the Parliaments of all the States directly concerned, of any power which can at the establishment of this Constitution be exercised only by the Parliament of the United Kingdom or by the Federal Council of Australasia :
- (xxxix) Matters incidental to the execution of any power vested by this Constitution in the Parliament or in either House thereof, or in the Government of the Commonwealth, or in the Federal Judicature, or in any department or officer of the Commonwealth.

52. The Parliament shall, subject to this Constitution, have exclusive power to make laws for the peace, order, and good government of the Commonwealth, with respect to—

- (i) The seat of Government of the Commonwealth, and all places acquired by the Commonwealth for public purposes :
- (ii) Matters relating to any department of the public service the control of which is by this Constitution transferred to the Executive Government of the Commonwealth :
- (iii) Other matters declared by this Constitution to be within the exclusive power of the Parliament.

53. Proposed laws appropriating revenue or moneys, or imposing taxation, shall not originate in the Senate. But a proposed law shall not be taken to appropriate revenue or moneys, or to impose taxation, by reason only of its containing provisions for the imposition or appropriation of fines or other pecuniary penalties, or for the demand or payment or appropriation of fees for licences, or fees for services under the proposed law.

The Senate may not amend proposed laws imposing taxation, or proposed laws appropriating revenue or moneys for the ordinary annual services of the Government.

The Senate may not amend any proposed laws so as to increase any proposed charge or burden on the people.

The Senate may at any stage return to the House of Representatives any proposed law which the Senate may not amend, requesting, by message, the omission or amendment of any items or provisions therein. And the House of Representatives may, if it thinks fit, make any of such omissions or amendments, with or without modifications.

Except as provided in this section, the Senate shall have equal power with the House of Representatives in respect of all proposed laws.

54. The proposed law which appropriates revenue or moneys for the ordinary annual services of the Government shall deal only with such appropriation.

55. Laws imposing taxation shall deal only with the imposition of taxation, and any provisions therein dealing with any other matter shall be of no effect.

Laws imposing taxation, except laws imposing duties of customs or of excise, shall deal with one subject of taxation only; but laws imposing duties of customs shall deal with duties of customs only, and laws imposing duties of excise shall deal with duties of excise only.

56. A vote, resolution, or proposed law for the appropriation of revenue or moneys shall not be passed unless the purpose of the appropriation has in the same session been recommended by message of the Governor-General to the House in which the proposal originated.

57. If the House of Representatives passes any proposed law, and the Senate rejects or fails to pass it, or passes it with amendments to which the House of Representatives will not agree, and if after an interval of three months the House of Representatives, in the same or the next session, again passes the proposed law with or without any amendments which have been made, suggested, or agreed to by the Senate, and the Senate rejects or fails to pass it, or passes it with amendments to which the House of Representatives will not agree, the Governor-General may dissolve the Senate and the House of Representatives simultaneously. But such dissolution shall not take place within six months before the date of the expiry of the House of Representatives by effluxion of time.

If after such dissolution the House of Representatives again passes the proposed law, with or without any amendments which have been made, suggested, or agreed to by the Senate, and the Senate rejects or fails to pass it, or passes it with amendments to which the House of Representatives will not agree, the Governor-General may convene a joint sitting of the members of the Senate and of the House of Representatives.

The members present at the joint sitting may deliberate and shall vote together upon the proposed law as last proposed by the House of Representatives, and upon amendments, if any, which have been made therein by one House and not agreed to by the other, and any such amendments which are affirmed by an absolute majority of the total number of the members of the Senate and House of Representatives shall be taken to have been carried, and if the proposed law, with the amendments, if any, so carried is affirmed by an absolute majority of the total number of members of the Senate and House of Representatives, it shall be taken to have been duly passed by both Houses of the Parliament, and shall be presented to the Governor-General for the Queen's assent.

58. When a proposed law passed by both Houses of the Parliament is presented to the Governor-General for the Queen's assent, he shall declare, according to his discretion, but subject to this Constitution, that he assents in the Queen's name, or that he withholds assent, or that he reserves the law for the Queen's pleasure.

The Governor-General may return to the House in which it originated any proposed law so presented to him, and may transmit therewith any amendments which he may recommend, and the Houses may deal with the recommendation.

59. The Queen may disallow any law within one year from the Governor-General's assent, and such disallowance on being made known by the Governor-General by speech or message to each of the Houses of the Parliament, or by Proclamation, shall annul the law from the day when the disallowance is so made known.

60. A proposed law reserved for the Queen's pleasure shall not have any force unless and until within two years from the day on which it was presented to the Governor-General for the Queen's assent the Governor-General makes known, by speech or message to each of the Houses of Parliament, or by Proclamation, that it has received the Queen's assent.

CHAPTER II.—THE EXECUTIVE GOVERNMENT.

61. The executive power of the Commonwealth is vested in the Queen and is exercisable by the Governor-General as the Queen's representative, and extends to the execution and maintenance of this Constitution, and of the laws of the Commonwealth.

62. There shall be a Federal Executive Council to advise the Governor-General in the government of the Commonwealth, and the members of the Council shall be chosen and summoned by the Governor-General and sworn as Executive Councillors, and shall hold office during his pleasure.

63. The provisions of this Constitution referring to the Governor-General in Council shall be construed as referring to the Governor-General acting with the advice of the Federal Executive Council.

64. The Governor-General may appoint officers to administer such departments of State of the Commonwealth as the Governor-General in Council may establish.

Such officers shall hold office during the pleasure of the Governor-General. They shall be members of the Federal Executive Council, and shall be the Queen's Ministers of State for the Commonwealth.

After the first general election no Minister of State shall hold office for a longer period than three months unless he is or becomes a senator or a member of the House of Representatives.

65. Until the Parliament otherwise provides, the Ministers of State shall not exceed seven in number, and shall hold such offices as the Parliament prescribes, or, in the absence of provision, as the Governor-General directs.*

66. There shall be payable to the Queen, out of the Consolidated Revenue Fund of the Commonwealth, for the salaries of the Ministers of State, an annual sum which, until the Parliament otherwise provides, shall not exceed twelve thousand pounds a year.*

67. Until the Parliament otherwise provides, the appointment and removal of all other officers of the Executive Government of the Commonwealth shall be vested in the Governor-General in Council, unless the appointment is delegated by the Governor-General in Council or by a law of the Commonwealth to some other authority.

68. The command in chief of the naval and military forces of the Commonwealth is vested in the Governor-General as the Queen's representative.

69. On a date or dates to be proclaimed by the Governor-General after the establishment of the Commonwealth the following departments of the public service in each State shall become transferred to the Commonwealth :—

Posts, telegraphs, and telephones :	|	Lighthouses, lightships, beacons, and buoys :
Naval and military defence :		Quarantine.

But the departments of customs and of excise in each State shall become transferred to the Commonwealth on its establishment.

70. In respect of matters which, under this Constitution, pass to the Executive Government of the Commonwealth, all powers and functions which at the establishment of the Commonwealth are vested in the Governor of a Colony, or in the Governor of a Colony with the advice of his Executive Council, or in any authority of a Colony, shall vest in the Governor-General, or in the Governor-General in Council, or in the authority exercising similar powers under the Commonwealth, as the case requires.

* By the Ministers of State Acts 1915 and 1917, the Ministers of State may exceed seven, but shall not exceed nine. £15,300 annually was allotted by these Acts for their salaries ; and £800 per annum each was added by the Parliamentary Allowances Act 1920.

CHAPTER III.—THE JUDICATURE.

71. The judicial power of the Commonwealth shall be vested in a Federal Supreme Court, to be called the High Court of Australia, and in such other federal courts as the Parliament creates, and in such other courts as it invests with federal jurisdiction. The High Court shall consist of a Chief Justice, and so many other Justices, not less than two, as the Parliament prescribes.

72. The Justices of the High Court and of the other Courts created by the Parliament—

- (i) Shall be appointed by the Governor-General in Council :
- (ii) Shall not be removed except by the Governor-General in Council, on an address from both Houses of the Parliament in the same session, praying for such removal on the ground of proved misbehaviour or incapacity :
- (iii) Shall receive such remuneration as the Parliament may fix ; but the remuneration shall not be diminished during their continuance in office.

73. The High Court shall have jurisdiction, with such exceptions and subject to such regulations as the Parliament prescribes, to hear and determine appeals from all judgments, decrees, orders, and sentences—

- (i) Of any Justice or Justices exercising the original jurisdiction of the High Court :
- (ii) Of any other federal court, or court exercising federal jurisdiction ; or of the Supreme Court of any State, or of any other court of any State from which at the establishment of the Commonwealth an appeal lies to the Queen in Council :

(iii) Of the Inter-State Commission, but as to questions of law only :

and the judgment of the High Court in all such cases shall be final and conclusive.

But no exception or regulation prescribed by the Parliament shall prevent the High Court from hearing and determining any appeal from the Supreme Court of a State in any matter in which at the establishment of the Commonwealth an appeal lies from such Supreme Court to the Queen in Council.

Until the Parliament otherwise provides, the conditions of and restrictions on appeals to the Queen in Council from the Supreme Courts of the several States shall be applicable to appeals from them to the High Court.

74. No appeal shall be permitted to the Queen in Council from a decision of the High Court upon any question, howsoever arising, as to the limits inter se of the Constitutional powers of the Commonwealth and those of any State or States, or as to the limits inter se of the Constitutional powers of any two or more States, unless the High Court shall certify that the question is one which ought to be determined by Her Majesty in Council.

The High Court may so certify if satisfied that for any special reason the certificate should be granted, and thereupon an appeal shall lie to Her Majesty in Council on the question without further leave.

Except as provided in this section, this Constitution shall not impair any right which the Queen may be pleased to exercise by virtue of Her Royal prerogative to grant special leave of appeal from the High Court to Her Majesty in Council. The Parliament may make laws limiting the matters in which such leave may be asked, but proposed laws containing any such limitation shall be reserved by the Governor-General for Her Majesty's pleasure.

75. In all matters—

- (i) Arising under any treaty :
- (ii) Affecting consuls or other representatives of other countries :
- (iii) In which the Commonwealth, or a person suing or being sued on behalf of the Commonwealth, is a party :
- (iv) Between States, or between residents of different States, or between a State and a resident of another State :
- (v) In which a writ of Mandamus or prohibition or an injunction is sought against an officer of the Commonwealth :

the High Court shall have original jurisdiction.

76. The Parliament may make laws conferring original jurisdiction on the High Court in any matter—

- (i) Arising under this Constitution, or involving its interpretation :
- (ii) Arising under any laws made by the Parliament :
- (iii) Of Admiralty and maritime jurisdiction :
- (iv) Relating to the same subject-matter claimed under the laws of different States.

77. With respect to any of the matters mentioned in the last two sections the Parliament may make laws—

- (i) Defining the jurisdiction of any federal court other than the High Court :
- (ii) Defining the extent to which the jurisdiction of any federal court shall be exclusive of that which belongs to or is invested in the courts of the States :
- (iii) Investing any court of a State with federal jurisdiction.

78. The Parliament may make laws conferring rights to proceed against the Commonwealth or a State in respect of matters within the limits of the judicial power.

79. The federal jurisdiction of any court may be exercised by such number of judges as the Parliament prescribes.

80. The trial on indictment of any offence against any law of the Commonwealth shall be by jury, and every such trial shall be held in the State where the offence was committed, and if the offence was not committed within any State the trial shall be held at such place or places as the Parliament prescribes.

CHAPTER IV.—FINANCE AND TRADE.

81. All revenues or moneys raised or received by the Executive Government of the Commonwealth shall form one Consolidated Revenue Fund, to be appropriated for the purposes of the Commonwealth in the manner and subject to the charges and liabilities imposed by this Constitution.

82. The costs, charges, and expenses incident to the collection, management, and receipt of the Consolidated Revenue Fund shall form the first charge thereon ; and the revenue of the Commonwealth shall in the first instance be applied to the payment of the expenditure of the Commonwealth.

83. No money shall be drawn from the Treasury of the Commonwealth except under appropriation made by law.

But until the expiration of one month after the first meeting of the Parliament the Governor-General in Council may draw from the Treasury and expend such moneys as may be necessary for the maintenance of any department transferred to the Commonwealth and for the holding of the first elections for the Parliament.

84. When any department of the public service of a State becomes transferred to the Commonwealth, all officers of the department shall become subject to the control of the Executive Government of the Commonwealth.

Any such officer who is not retained in the service of the Commonwealth shall, unless he is appointed to some other office of equal emolument in the public service of the State. be entitled to receive from the State any pension, gratuity, or other compensation, payable under the law of the State on the abolition of his office.

Any such officer who is retained in the service of the Commonwealth shall preserve all his existing and accruing rights, and shall be entitled to retire from office at the time, and on the pension or retiring allowance, which would be permitted by the law of the State if his service with the Commonwealth were a continuation of his service with the State. Such pension or retiring allowance shall be paid to him by the Commonwealth : but the State shall pay to the Commonwealth a part thereof, to be calculated on the proportion which his term of service with the State bears to his whole term of service, and for the purpose of the calculation his salary shall be taken to be that paid to him by the State at the time of the transfer.

Any officer who is, at the establishment of the Commonwealth, in the public service of a State, and who is, by consent of the Governor of the State with the advice of the

Executive Council thereof, transferred to the public service of the Commonwealth, shall have the same rights as if he had been an officer of a department transferred to the Commonwealth and were retained in the service of the Commonwealth.

85. When any department of the public service of a State is transferred to the Commonwealth—

- (i) All property of the State of any kind, used exclusively in connexion with the department, shall become vested in the Commonwealth : but, in the case of the departments controlling customs and excise and bounties, for such time only as the Governor-General in Council may declare to be necessary :
- (ii) The Commonwealth may acquire any property of the State, of any kind used, but not exclusively used in connexion with the department ; the value thereof shall, if no agreement can be made, be ascertained in, as nearly as may be, the manner in which the value of land, or of an interest in land, taken by the State for public purposes is ascertained under the law of the State in force at the establishment of the Commonwealth :
- (iii) The Commonwealth shall compensate the State for the value of any property passing to the Commonwealth under this section : if no agreement can be made as to the mode of compensation, it shall be determined under laws to be made by the Parliament :
- (iv) The Commonwealth shall, at the date of the transfer, assume the current obligations of the State in respect of the department transferred.

86. On the establishment of the Commonwealth, the collection and control of duties of customs and of excise, and the control of the payment of bounties, shall pass to the Executive Government of the Commonwealth.

87. During a period of ten years after the establishment of the Commonwealth and thereafter until the Parliament otherwise provides, of the net revenue of the Commonwealth from duties of customs and of excise not more than one-fourth shall be applied annually by the Commonwealth towards its expenditure.

The balance shall, in accordance with this Constitution, be paid to the several States, or applied towards the payment of interest on debts of the several States taken over by the Commonwealth.

88. Uniform duties of customs shall be imposed within two years after the establishment of the Commonwealth.

89. Until the imposition of uniform duties of customs—

- (i) The Commonwealth shall credit to each State the revenues collected therein by the Commonwealth.
- (ii) The Commonwealth shall debit to each State—
 - (a) The expenditure therein of the Commonwealth incurred solely for the maintenance or continuance, as at the time of transfer, of any department transferred from the State to the Commonwealth ;
 - (b) The proportion of the State, according to the number of its people, in the other expenditure of the Commonwealth.
- (iii) The Commonwealth shall pay to each State month by month the balance (if any) in favour of the State.

90. On the imposition of uniform duties of customs the power of the Parliament to impose duties of customs and of excise, and to grant bounties on the production or export of goods, shall become exclusive.

On the imposition of uniform duties of customs all laws of the several States imposing duties of customs or of excise, or offering bounties on the production or export of goods, shall cease to have effect, but any grant of or agreement for any such bounty lawfully made by or under the authority of the Government of any State shall be taken to be good if made before the thirtieth day of June, one thousand eight hundred and ninety-eight, and not otherwise.

91. Nothing in this Constitution prohibits a State from granting any aid to or bounty on mining for gold, silver, or other metals, nor from granting, with the consent of both Houses of the Parliament of the Commonwealth expressed by resolution, any aid to or bounty on the production or export of goods.

92. On the imposition of uniform duties of customs, trade, commerce, and intercourse among the States, whether by means of internal carriage or ocean navigation, shall be absolutely free.

But notwithstanding anything in this Constitution, goods imported before the imposition of uniform duties of customs into any State, or into any Colony which, whilst the goods remain therein, becomes a State, shall, on thence passing into another State within two years after the imposition of such duties, be liable to any duty chargeable on the importation of such goods into the Commonwealth, less any duty paid in respect of the goods on their importation.

93. During the first five years after the imposition of uniform duties of customs and thereafter until the Parliament otherwise provides—

- (i) The duties of customs chargeable on goods imported into a State and afterwards passing into another State for consumption, and the duties of excise paid on goods produced or manufactured in a State and afterwards passing into another State for consumption, shall be taken to have been collected not in the former but in the latter State :
- (ii) Subject to the last sub-section, the Commonwealth shall credit revenue, debit expenditure, and pay balances to the several States as prescribed for the period preceding the imposition of uniform duties of customs.

94. After five years from the imposition of uniform duties of customs, the Parliament may provide, on such basis as it deems fair, for the monthly payment to the several States of all surplus revenue of the Commonwealth.

95. Notwithstanding anything in this Constitution, the Parliament of the State of Western Australia, if that State be an original State, may, during the first five years after the imposition of uniform duties of customs, impose duties of customs on goods passing into that State and not originally imported from beyond the limits of the Commonwealth ; and such duties shall be collected by the Commonwealth.

But any duty so imposed on any goods shall not exceed during the first of such years the duty chargeable on the goods under the law of Western Australia in force at the imposition of uniform duties, and shall not exceed during the second, third, fourth, and fifth of such years respectively, four-fifths, three-fifths, two-fifths, and one-fifth of such latter duty, and all duties imposed under this section shall cease at the expiration of the fifth year after the imposition of uniform duties.

If at any time during the five years the duty on any goods under this section is higher than the duty imposed by the Commonwealth on the importation of the like goods, then such higher duty shall be collected on the goods when imported into Western Australia from beyond the limits of the Commonwealth.

96. During a period of ten years after the establishment of the Commonwealth and thereafter until the Parliament otherwise provides, the Parliament may grant financial assistance to any State on such terms and conditions as the Parliament thinks fit.

97. Until the Parliament otherwise provides, the laws in force in any Colony which has become or becomes a State with respect to the receipt of revenue and the expenditure of money on account of the Government of the Colony, and the review and audit of such receipt and expenditure, shall apply to the receipt of revenue and the expenditure of money on account of the Commonwealth in the State in the same manner as if the Commonwealth, or the Government or an officer of the Commonwealth, were mentioned whenever the Colony, or the Government or an officer of the Colony, is mentioned.

98. The power of the Parliament to make laws with respect to trade and commerce extends to navigation and shipping, and to railways the property of any State.

99. The Commonwealth shall not, by any law or regulation of trade, commerce, or revenue, give preference to one State or any part thereof over another State or any part thereof.

100. The Commonwealth shall not, by any law or regulation of trade or commerce, abridge the right of a State or of the residents therein to the reasonable use of the waters of rivers for conservation or irrigation.

101. There shall be an Inter-State Commission, with such powers of adjudication and administration as the Parliament deems necessary for the execution and maintenance, within the Commonwealth, of the provisions of this Constitution relating to trade and commerce, and of all laws made thereunder.*

102. The Parliament may by any law with respect to trade or commerce forbid, as to railways, any preference or discrimination by any State, or by any authority constituted under a State, if such preference or discrimination is undue and unreasonable, or unjust to any State; due regard being had to the financial responsibilities incurred by any State in connexion with the construction and maintenance of its railways. But no preference or discrimination shall, within the meaning of this section, be taken to be undue and unreasonable, or unjust to any State, unless so adjudged by the Inter-State Commission.

103. The members of the Inter-State Commission—

- (i) Shall be appointed by the Governor-General in Council :
- (ii) Shall hold office for seven years, but may be removed within that time by the Governor-General in Council, on an address from both Houses of the Parliament in the same session praying for such removal on the ground of proved misbehaviour or incapacity :
- (iii) Shall receive such remuneration as the Parliament may fix ; but such remuneration shall not be diminished during their continuance in office.

104. Nothing in this Constitution shall render unlawful any rate for the carriage of goods upon a railway, the property of a State, if the rate is deemed by the Inter-State Commission to be necessary for the development of the territory of the State, and if the rate applies equally to goods within the State and to goods passing into the State from other States.

105. The Parliament may take over from the States their public debts [as existing at the establishment of the Commonwealth],† or a proportion thereof according to the respective numbers of their people as shown by the latest statistics of the Commonwealth, and may convert, renew, or consolidate such debts, or any part thereof ; and the State shall indemnify the Commonwealth in respect of the debts taken over, and thereafter the interest payable in respect of the debts shall be deducted and retained from the portions of the surplus revenue of the Commonwealth payable to the several States, or if such surplus is insufficient, or if there is no surplus, then the deficiency or the whole amount shall be paid by the several States.

CHAPTER V.—THE STATES.

106. The Constitution of each State of the Commonwealth shall, subject to this Constitution, continue as at the establishment of the Commonwealth, or as at the admission or establishment of the State, as the case may be, until altered in accordance with the Constitution of the State.

107. Every power of the Parliament of a Colony which has become or becomes a State, shall, unless it is by this Constitution exclusively vested in the Parliament of the Commonwealth or withdrawn from the Parliament of the State, continue as at the establishment of the Commonwealth, or as at the admission or establishment of the State, as the case may be.

108. Every law in force in a Colony which has become or becomes a State, and relating to any matter within the powers of the Parliament of the Commonwealth, shall, subject to this Constitution, continue in force in the State ; and, until provision is made in that behalf by the Parliament of the Commonwealth, the Parliament of the State shall have such powers of alteration and of repeal in respect of any such law as the Parliament of the Colony had until the Colony became a State.

109. When a law of a State is inconsistent with a law of the Commonwealth, the latter shall prevail, and the former shall, to the extent of the inconsistency, be invalid.

* The Commission was brought into existence in 1913, under Act No. 33 of 1912, by the appointment of Commissioners for seven years. When this period expired no fresh appointments were made.

† Under Section 2 of the Constitution Alteration (State Debts) 1909, the words in square brackets are omitted.

110. The provisions of this Constitution relating to the Governor of a State extend and apply to the Governor for the time being of the State, or other chief executive officer or administrator of the government of the State.

111. The Parliament of a State may surrender any part of the State to the Commonwealth; and upon such surrender, and the acceptance thereof by the Commonwealth, such part of the State shall become subject to the exclusive jurisdiction of the Commonwealth.

112. After uniform duties of customs have been imposed, a State may levy on imports or exports, or on goods passing into or out of the State, such charges as may be necessary for executing the inspection laws of the State; but the net produce of all charges so levied shall be for the use of the Commonwealth; and any such inspection laws may be annulled by the Parliament of the Commonwealth.

113. All fermented, distilled, or other intoxicating liquids passing into any State or remaining therein for use, consumption, sale, or storage, shall be subject to the laws of the State as if such liquids had been produced in the State.

114. A State shall not, without the consent of the Parliament of the Commonwealth, raise or maintain any naval or military force, or impose any tax on property of any kind belonging to the Commonwealth, nor shall the Commonwealth impose any tax on property of any kind belonging to a State.

115. A State shall not coin money, nor make anything but gold and silver coin a legal tender in payment of debts.

116. The Commonwealth shall not make any law for establishing any religion, or for imposing any religious observance, or for prohibiting the free exercise of any religion, and no religious test shall be required as a qualification for any office or public trust under the Commonwealth.

117. A subject of the Queen, resident in any State, shall not be subject in any other State to any disability or discrimination which would not be equally applicable to him if he were a subject of the Queen resident in such other State.

118. Full faith and credit shall be given, throughout the Commonwealth, to the laws, the public Acts and records, and the judicial proceedings of every State.

119. The Commonwealth shall protect every State against invasion and, on the application of the Executive Government of the State, against domestic violence.

120. Every State shall make provision for the detention in its prisons of persons accused or convicted of offences against the laws of the Commonwealth, and for the punishment of persons convicted of such offences, and the Parliament of the Commonwealth may make laws to give effect to this provision.

CHAPTER VI.—NEW STATES.

121. The Parliament may admit to the Commonwealth or establish new States, and may upon such admission or establishment make or impose such terms and conditions, including the extent of representation in either House of the Parliament, as it thinks fit.

122. The Parliament may make laws for the government of any territory surrendered by any State to and accepted by the Commonwealth, or of any territory placed by the Queen under the authority of and accepted by the Commonwealth, or otherwise acquired by the Commonwealth, and may allow the representation of such territory in either House of the Parliament to the extent and on the terms which it thinks fit.

123. The Parliament of the Commonwealth may, with the consent of the Parliament of a State, and the approval of the majority of the electors of the State voting upon the question, increase, diminish, or otherwise alter the limits of the State, upon such terms and conditions as may be agreed on, and may, with the like consent, make provision respecting the effect and operation of any increase or diminution or alteration of territory in relation to any State affected.

124. A new State may be formed by separation of territory from a State, but only with consent of the Parliament thereof, and a new State may be formed by the union of two or more States or parts of States, but only with the consent of the Parliaments of the States affected.

CHAPTER VII.—MISCELLANEOUS.

125. The seat of Government of the Commonwealth shall be determined by the Parliament, and shall be within territory which shall have been granted to or acquired by the Commonwealth, and shall be vested in and belong to the Commonwealth, and shall be in the State of New South Wales, and be distant not less than one hundred miles from Sydney.

Such territory shall contain an area of not less than one hundred square miles, and such portion thereof as shall consist of Crown lands shall be granted to the Commonwealth without any payment therefor.

The Parliament shall sit at Melbourne until it meet at the seat of Government.

126. The Queen may authorize the Governor-General to appoint any person, or any persons jointly or severally, to be his deputy or deputies within any part of the Commonwealth, and in that capacity to exercise during the pleasure of the Governor-General such powers and functions of the Governor-General as he thinks fit to assign to such deputy or deputies, subject to any limitations expressed or directions given by the Queen : but the appointment of such deputy or deputies shall not affect the exercise by the Governor-General himself of any power or function.

127. In reckoning the numbers of the people of the Commonwealth, or of a State or other part of the Commonwealth, aboriginal natives shall not be counted.

CHAPTER VIII.—ALTERATION OF THE CONSTITUTION.

128. This Constitution shall not be altered except in the following manner :—

The proposed law for the alteration thereof must be passed by an absolute majority of each House of the Parliament, and not less than two nor more than six months after its passage through both Houses the proposed law shall be submitted in each State to the electors qualified to vote for the election of members of the House of Representatives.

But if either House passes any such proposed law by an absolute majority, and the other House rejects or fails to pass it or passes it with any amendment to which the first-mentioned House will not agree, and if after an interval of three months the first-mentioned House in the same or the next session again passes the proposed law by an absolute majority with or without any amendment which has been made or agreed to by the other House, and such other House rejects or fails to pass it or passes it with any amendment to which the first-mentioned House will not agree, the Governor-General may submit the proposed law as last proposed by the first-mentioned House, and either with or without any amendments subsequently agreed to by both Houses, to the electors in each State qualified to vote for the election of the House of Representatives.

When a proposed law is submitted to the electors the vote shall be taken in such manner as the Parliament prescribes. But until the qualification of electors of members of the House of Representatives becomes uniform throughout the Commonwealth, only one-half the electors voting for and against the proposed law shall be counted in any State in which adult suffrage prevails.

And if in a majority of the States a majority of the electors voting approve the proposed law, and if a majority of all the electors voting also approve the proposed law, it shall be presented to the Governor-General for the Queen's assent.

No alteration diminishing the proportionate representation of any State in either House of the Parliament, or the minimum number of representatives of a State in the House of Representatives, or increasing, diminishing, or otherwise altering the limits of the State, or in any manner affecting the provisions of the Constitution in relation thereto, shall become law unless the majority of the electors voting in that State approve the proposed law.

SCHEDULE.

OATH.

I, A.B., do swear that I will be faithful and bear true allegiance to Her Majesty Queen Victoria, Her heirs and successors according to law. So HELP ME GOD!

AFFIRMATION.

I, A.B., do solemnly and sincerely affirm and declare that I will be faithful and bear true allegiance to Her Majesty Queen Victoria, Her heirs and successors according to law.

(NOTE.—*The name of the King or Queen of the United Kingdom of Great Britain and Ireland for the time being is to be substituted from time to time.*)

2. The Royal Proclamation.—The preceding Act received the Royal assent on the 9th July, 1900. This made it lawful to declare that the people of Australia should be united in a Federal Commonwealth. This proclamation, made on the 17th September, 1900, constituted the Commonwealth as from the 1st January, 1901 : it reads as follows :—

BY THE QUEEN.

A PROCLAMATION.

(Signed) VICTORIA R.

WHEREAS by an Act of Parliament passed in the Sixty-third and Sixty-fourth Years of Our Reign, intituled "An Act to constitute the Commonwealth of Australia," it is enacted that it shall be lawful for the Queen, with the advice of the Privy Council, to declare by Proclamation, that, on and after a day therein appointed, not being later than One year after the passing of this Act, the people of *New South Wales, Victoria, South Australia, Queensland, and Tasmania*, and also, if Her Majesty is satisfied that the people of *Western Australia* have agreed thereto, of *Western Australia*, shall be united in a Federal Commonwealth under the name of the Commonwealth of Australia.

And whereas We are satisfied that the people of *Western Australia* have agreed thereto accordingly.

We therefore, by and with the advice of Our Privy Council, have thought fit to issue this Our Royal Proclamation, and We do hereby declare that on and after the First day of *January* One thousand nine hundred and one, the people of *New South Wales, Victoria, South Australia, Queensland, Tasmania, and Western Australia* shall be united in a Federal Commonwealth under the name of the Commonwealth of Australia.

Given at Our Court at *Balmoral* this Seventeenth day of *September*, in the Year of Our Lord One thousand nine hundred, and in the Sixty-fourth Year of Our Reign.

GOD SAVE THE QUEEN.

§ 9. Commonwealth Administration and Legislation.

1. The Commonwealth Parliaments.—The first Parliament of the Commonwealth was convened by proclamation dated 29th April, 1901, by His Excellency the late Marquis of Linlithgow, then Earl of Hopetoun, Governor-General. It was opened on the 9th May following by H.R.H. the Duke of Cornwall and York, who had been sent to Australia for that purpose by His Majesty the King; the Rt. Hon. Sir Edmund Barton, P.C., G.C.M.G., K.C., being Prime Minister.

The following table gives the number and duration of Parliaments since Federation :—

COMMONWEALTH PARLIAMENTS, 1901 TO 1925.

Number of Parliament.	Date of Opening.	Date of Dissolution.
First	29th April, 1901 ..	23rd November, 1903
Second	2nd March, 1904 ..	12th October, 1906
Third	20th February, 1907 ..	19th February, 1910
Fourth	1st July, 1910 ..	23rd April, 1913
Fifth	9th July, 1913 ..	30th July, 1914(a)
Sixth	8th October, 1914 ..	26th March, 1917
Seventh	14th June, 1917 ..	3rd November, 1919
Eighth	26th February, 1920 ..	6th November, 1922
Ninth	28th February, 1923 ..	

(a) On this occasion, the Governor-General, acting on the advice of the Ministry, and under section 57 of the Constitution, granted a dissolution of both the Senate and the House of Representatives, this being the first occasion since Federation on which a dissolution of both Houses had occurred.

2. **Governors-General and Ministries.**—The following statements show the names of the several Governors-General, and the constitution of the Ministries which have directed the administration of the affairs of the Commonwealth since its creation:—

(a) **GOVERNORS-GENERAL.**

- Rt. Hon. EARL OF HOPETOUN (afterwards MARQUIS OF LINLITHGOW), P.C., K.T., G.C.M.G., G.C.V.O. Sworn 1st January, 1901; recalled 9th May, 1902.
 Rt. Hon. HALLAM BARON TENNYSON, G.C.M.G. (Act. Governor-General). Sworn 17th July, 1902.
 Rt. Hon. HALLAM BARON TENNYSON, G.C.M.G. (Governor-General). Sworn 9th January, 1903 recalled 21st January, 1904.
 Rt. Hon. HENRY STAFFORD BARON NORTHCOTE, P.C., G.C.M.G., G.C.I.E., C.B. Sworn 21st January, 1904; recalled 8th September, 1908.
 Rt. Hon. WILLIAM HUMBLE EARL OF DUDLEY, P.C., G.C.M.G., G.C.V.O., etc. Sworn 9th September, 1908; recalled 31st July, 1911.
 Rt. Hon. THOMAS BARON DENMAN, P.C., G.C.M.G., K.C.V.O. Sworn 31st July, 1911; recalled 16th May, 1914.
 Rt. Hon. SIR RONALD CRAUFURD MUNRO FERGUSON (afterwards VISCOUNT NOVAR OF RAITH), P.O., G.C.M.G. Sworn 18th May, 1914; recalled 5th October, 1920.
 Rt. Hon. HENRY WILLIAM BARON FORSTER OF LEPE, P.C., G.C.M.G. Sworn 6th October, 1920.

(b) **BARTON ADMINISTRATION, 1st January, 1901, to 23rd September, 1903.**

DEPARTMENTS.	MINISTERS.
External Affairs	Rt. Hon. SIR EDMUND BARTON, P.C., G.C.M.G., K.C.
Attorney-General	Hon. ALFRED DEAKIN.
Home Affairs	{ Hon. SIR WILLIAM JOHN LYNE, K.C.M.G. (to 7/8/'03). Rt. Hon. SIR JOHN FORREST, P.C., G.C.M.G. (from 7/8/'03).*
Treasurer	Rt. Hon. SIR GEORGE TURNER, P.C., K.C.M.G.
Trade and Customs	{ Rt. Hon. CHARLES CAMERON KINGSTON, P.C., K.C. (resigned 24/7/'03). Hon. SIR WILLIAM JOHN LYNE, K.C.M.G. (from 7/8/'03).
Defence	{ Hon. SIR JAMES ROBERT DICKSON, K.C.M.G. (died 10/1/'01). Rt. Hon. SIR JOHN FORREST, P.C., G.C.M.G. (17/1/'01 to 7/8/'03).* Hon. JAMES GEORGE DRAKE (from 7/8/'03).
Postmaster-General	{ Rt. Hon. SIR JOHN FORREST, P.C., G.C.M.G. (to 17/1/'01).* Hon. JAMES GEORGE DRAKE (5/2/'01 to 7/8/'03). Hon. SIR PHILIP OAKLEY FYSH, K.C.M.G. (from 7/8/'03).
Vice-President Executive Council	Hon. RICHARD EDWARD O'CONNOR, K.C.
Without Portfolio	{ Hon. N. E. LEWIS (to 23/4/'01).† Hon. SIR PHILIP OAKLEY FYSH, K.C.M.G. (26/4/'01 to 7/8/'03).

(c) **FIRST DEAKIN ADMINISTRATION, 23rd September, 1903, to 26th April, 1904.**

DEPARTMENTS.	MINISTERS.
External Affairs	Hon. ALFRED DEAKIN.
Trade and Customs	Hon. SIR WILLIAM JOHN LYNE, K.C.M.G.
Treasurer	Rt. Hon. SIR GEORGE TURNER, P.C., K.C.M.G.
Home Affairs	Rt. Hon. SIR JOHN FORREST, P.C., G.C.M.G.*
Attorney-General	Hon. JAMES GEORGE DRAKE.
Postmaster-General	Hon. SIR PHILIP OAKLEY FYSH, K.C.M.G.
Defence	Hon. AUSTIN CHAPMAN.
Vice-President Executive Council	Hon. THOMAS PLAYFORD.

(d) **WATSON ADMINISTRATION, 26th April to 17th August, 1904.**

DEPARTMENTS.	MINISTERS.
Treasurer	Hon. JOHN CHRISTIAN WATSON.
External Affairs	Hon. WILLIAM MORRIS HUGHES.‡
Attorney-General	Hon. HENRY BOURNES HIGGINS, K.C.
Home Affairs	Hon. EGERTON LEE BATCHELOR.
Trade and Customs	Hon. ANDREW FISHER.§
Defence	Hon. ANDERSON DAWSON.
Postmaster-General	Hon. HUGH MAHON.
Vice-President Executive Council	Hon. GREGOR MCGREGOR.

* Created Lord Forrest of Bunbury, 1918. † K.C.M.G., 1902. ‡ P.C., 1916. § P.C., 1911.

(e) REID-McLEAN ADMINISTRATION, 17th August, 1904, to 4th July, 1905.

DEPARTMENTS.	MINISTERS.
External Affairs	Rt. Hon. GEORGE HOUSTON REID, P.C., K.C.*
Trade and Customs	Hon. ALLAN McLEAN.
Attorney-General	Hon. SIR JOSIAH HENRY SYMON, K.C.M.G., K.C.
Treasurer	Rt. Hon. SIR GEORGE TURNER, P.C., K.C.M.G.
Home Affairs	Hon. DUGALD THOMSON.
Defence	Hon. JAMES WHITESIDE McCAY.†
Postmaster-General	Hon. SYDNEY SMITH.
Vice-President Executive Council	Hon. JAMES GEORGE DRAKE.

(f) SECOND DEAKIN ADMINISTRATION, 4th July, 1905, to 12th November, 1908.

DEPARTMENTS.	MINISTERS.
External Affairs	HON. ALFRED DEAKIN.
Attorney-General	{ Hon. ISAAC ALFRED ISAACS, K.C. (to 12/10/'06). { Hon. LITTLETON ERNEST GROOM† (from 12/10/'06).
Trade and Customs	{ Hon. SIR WILLIAM JOHN LYNE, K.C.M.G. (to 30/7/'07). { Hon. AUSTIN CHAPMAN (from 30/7/'07).
Treasurer	{ Rt. Hon. SIR JOHN FORREST, P.C., G.C.M.G. (to 30/7/'07).§ { Hon. SIR WILLIAM JOHN LYNE (from 30/7/'07).
Postmaster-General	{ Hon. AUSTIN CHAPMAN (to 30/7/'07). { Hon. SAMUEL MAUGER (from 30/7/'07).
Defence	{ Hon. THOMAS PLAYFORD (to 24/1/'07). { Hon. THOMAS THOMSON EWING (from 24/1/'07).§
Home Affairs	{ Hon. LITTLETON ERNEST GROOM‡ (to 12/10/'06). { Hon. THOMAS THOMSON EWING (from 12/10/'06 to 24/1/'07).|| { Hon. JOHN HENRY KEATING (from 24/1/'07).
Vice-President Executive Council	{ Hon. THOMAS THOMSON EWING (to 12/10/'06).|| { Hon. JOHN HENRY KEATING (from 12/10/'06 to 20/2/'07). { Hon. ROBERT WALLACE BEST (from 20/2/'07).||
Honorary Ministers	{ Hon. J. H. KEATING (from 5/7/'05 to 12/10/'06). { Hon. S. MAUGER (from 12/10/'06 to 30/7/'07). { Hon. J. HUME COOK (from 28/1/'08).

(g) FIRST FISHER ADMINISTRATION, 12th November 1908, to 2nd June, 1909.

DEPARTMENTS.	MINISTERS.
Treasurer	Hon. ANDREW FISHER.¶
Attorney-General	Hon. WILLIAM MORRIS HUGHES.**
External Affairs	Hon. EGERTON LEE BATCHELOR.
Home Affairs	Hon. HUGH MAHON.
Postmaster-General	Hon. JOSIAH THOMAS.
Defence	Hon. GEORGE FOSTER PEARCE.††
Trade and Customs	Hon. FRANK GWYNNE TUDOR.
Vice-President Executive Council	Hon. GREGOR MCGREGOR.
Honorary Minister	Hon. JAMES HUTCHISON.

(h) THIRD DEAKIN ADMINISTRATION, 2nd June, 1909, to 29th April, 1910.

DEPARTMENTS.	MINISTERS.
Prime Minister (without Portfolio)	Hon. ALFRED DEAKIN.
Defence	Hon. JOSEPH COOK.††
Treasurer	Rt. Hon. SIR JOHN FORREST, P.C., G.C.M.G.§
Trade and Customs	Hon. SIR ROBERT WALLACE BEST, K.C.M.G.
External Affairs	Hon. LITTLETON ERNEST GROOM.‡
Attorney-General	Hon. PATRICK McMAHON GLYNN.
Postmaster-General	Hon. SIR JOHN QUICK.
Home Affairs	Hon. GEORGE WARBURTON FULLER.
Vice-President Executive Council	Hon. EDWARD DAVIS MILLEN.
Honorary Minister	Colonel The Hon. JUSTIN FOX GREENLAW FOXTON, C.M.G.

* K.C.M.G., 1909; G.C.M.G., 1911; G.C.B., 1916. † K.C.M.G., 1918. ‡ K.C.M.G., K.C., 1924.
§ Created Lord Forrest of Bunbury, 1918. || K.C.M.G., 1908. ¶ P.C., 1911. ** P.C., 1916.
†† P.C., 1914; G.C.M.G., 1918. ‡‡ P.C., 1921.

(i) SECOND FISHER ADMINISTRATION, 29th April, 1910, to 24th June, 1913.

DEPARTMENTS.	MINISTERS.
Treasurer	Hon. ANDREW FISHER.*
Attorney-General	Hon. WILLIAM MORRIS HUGHES.†
External Affairs	{ Hon. EGERTON LEE BATCHELOR (died Oct., 1911). Hon. JOSIAH THOMAS (from 14/10/'11).
Postmaster-General	{ Hon. JOSIAH THOMAS (to 14/10/'11). Hon. CHARLES EDWARD FRAZER (from 14/10/'11).
Defence	Hon. GEORGE FOSTER PEARCE.**
Trade and Customs	Hon. FRANK GWYNNE TUDOR.
Home Affairs	Hon. KING O'MALLEY.
Vice-President Executive Council	Hon. GREGOR MCGREGOR.
Honorary Ministers	{ Hon. EDWARD FINDLEY. Hon. CHARLES EDWARD FRAZER (to 14/10/'11). Hon. ERNEST ALFRED ROBERTS (from 23/10/'11).

(j) COOK ADMINISTRATION, 24th June, 1913, to 17th September, 1914.

DEPARTMENTS.	MINISTERS.
Home Affairs	Hon. JOSEPH COOK.‡
Treasurer	Rt. Hon. SIR JOHN FORREST, P.C., G.C.M.G.§
Attorney-General	Hon. WILLIAM HILL IRVINE, K.C.||
Defence	Hon. EDWARD DAVIS MILLEN.
External Affairs	Hon. PATRICK McMAHON GLYNN, K.O.
Trade and Customs	Hon. LITTLETON ERNEST GROOM.††
Postmaster-General	Hon. AGAR WYNNE.
Vice-President Executive Council	Hon. JAMES HIERS MCCOLL.
Honorary Ministers	{ Hon. JOHN SINGLETON CLEMENS. Hon. WILLIAM HENRY KELLY.

(k) THIRD FISHER ADMINISTRATION, 17th September, 1914, to 27th October, 1915.

DEPARTMENTS.	MINISTERS.
Treasurer	Rt. Hon. ANDREW FISHER, P.C.
Attorney-General	Hon. WILLIAM MORRIS HUGHES.†
Defence	Hon. GEORGE FOSTER PEARCE.**
Trade and Customs	Hon. FRANK GWYNNE TUDOR.
External Affairs	{ Hon. JOHN ANDREW ARTHUR (died December, 1914). Hon. HUGH MAHON (from 14/12/'14).
Home Affairs	Hon. WILLIAM OLIVER ARCHIBALD.
Postmaster-General	Hon. WILLIAM GUTHRIE SPENCE.
Minister for the Navy	Hon. JENS AUGUST JENSEN (from 12/7/'15).
Vice-President Executive Council	Hon. ALBERT GARDINER.
Assistant Ministers	{ Hon. HUGH MAHON (to 14/12/'14). Hon. JENS AUGUST JENSEN (to 12/7/'15). Hon. EDWARD JOHN RUSSELL.

(l) FIRST HUGHES ADMINISTRATION from 27th October, 1915, to 14th November, 1916.

DEPARTMENTS.	MINISTERS.
Prime Minister and Attorney-General	Hon. WILLIAM MORRIS HUGHES.†
Defence	Hon. GEORGE FOSTER PEARCE.**
Trade and Customs	{ Hon. FRANK GWYNNE TUDOR (to 14/9/'16). Hon. WILLIAM MORRIS HUGHES (from 29/9/'16).
Treasurer	Hon. WILLIAM GUY HIGGS.¶
Minister for the Navy	Hon. JENS AUGUST JENSEN.
Home Affairs	Hon. KING O'MALLEY.
External Affairs	Hon. HUGH MAHON.
Postmaster-General	Hon. WILLIAM WEBSTER.
Vice-President Executive Council	Hon. ALBERT GARDINER.¶
Assistant Minister	Hon. EDWARD JOHN RUSSELL.¶

* P.C., 1911. † P.C., 1916. ‡ P.C., 1914; G.C.M.G., 1918. § Created Lord Forrest of Bunbury, 1918. || K.C.M.G., 1914. ¶ Resigned 27/10/'16. ** P.C., 1921. †† K.C.M.G., K.C., 1924.

(m) SECOND HUGHES ADMINISTRATION from 14th Nov., 1916, to 17th Feb., 1917.

DEPARTMENTS.	MINISTERS.
Prime Minister and Attorney-General	Rt. Hon. WILLIAM MORRIS HUGHES, P.C.
Minister for Defence	Hon. GEORGE FOSTER PEARCE||
Minister for the Navy	Hon. JENS AUGUST JENSEN.
Postmaster-General	Hon. WILLIAM WEBSTER.
Treasurer	Hon. ALEXANDER POYNTON.
Minister for Trade and Customs..	Hon. WILLIAM OLIVER ARCHIBALD.
Minister for Home Affairs ..	Hon. FREDERICK WILLIAM BAMFORD.
Minister for Works	Hon. PATRICK JOSEPH LYNCH.
Vice-President Executive Council	Hon. WILLIAM GUTHRIE SPENCE.
Assistant Ministers	{ Hon. EDWARD JOHN RUSSELL.
	{ Hon. WILLIAM HENRY LAIRD SMITH.

(n) AUSTRALIAN NATIONAL WAR GOVERNMENT from 17th February, 1917, to 8th January, 1918.

DEPARTMENTS.	MINISTERS.
Prime Minister and Attorney-General	Rt. Hon. WILLIAM MORRIS HUGHES, P.C.
Minister for the Navy	Rt. Hon. JOSEPH COOK, P.C.*
Treasurer	Rt. Hon. SIR JOHN FORREST, P.C., G.C.M.G.†
Minister for Defence	Hon. GEORGE FOSTER PEARCE||
Vice-President Executive Council	{ Hon. EDWARD DAVIS MILLEN.
	{ Hon. LITTLETON ERNEST GROOM¶ (from 16/11/'17).
Minister for Repatriation ..	{ Hon. EDWARD DAVIS MILLEN (from 28/9/'17).
Minister for Works and Railways	{ Hon. WILLIAM ALEXANDER WATT‡
Minister for Home and Territories	{ Hon. PATRICK McMAHON GLYNN, K.C.
Minister for Trade and Customs..	{ Hon. JENS AUGUST JENSEN.
Postmaster-General	{ Hon. WILLIAM WEBSTER.
Honorary Ministers	{ Hon. LITTLETON ERNEST GROOM¶
	{ Hon. EDWARD JOHN RUSSELL.

(o) AUSTRALIAN NATIONAL WAR GOVERNMENT from 10th January, 1918, to 9th February, 1923.

DEPARTMENTS.	MINISTERS.
Prime Minister and Minister for External Affairs	Rt. Hon. WILLIAM MORRIS HUGHES, P.C., K.C.
Attorney-General	{ Rt. Hon. WILLIAM MORRIS HUGHES, P.C., K.C. (to 21/12/'21).
	{ Hon. LITTLETON ERNEST GROOM¶ (from 21/12/'21).
Minister for the Navy	{ Rt. Hon. JOSEPH COOK, P.C.* (to 28/7/'20).
	{ Rt. Hon. WILLIAM HENRY LAIRD SMITH (from 28/7/'20 to 21/12/'21).
	{ Rt. Hon. LORD FORREST, P.C., G.C.M.G. (to 27/3/'18; died 4th September, 1918).
Treasurer	{ Hon. WILLIAM ALEXANDER WATT‡ (from 27/3/'18; resigned 15/6/'20).
	{ Rt. Hon. JOSEPH COOK, P.C.* (from 28/7/'20 to 21/12/'21).
	{ Hon. STANLEY MELBOURNE BRUCE, M.C.§ (from 21/12/'21).
Minister for Defence	{ Hon. GEORGE FOSTER PEARCE|| (to 21/12/'21).
Minister for Repatriation ..	{ Hon. WALTER MASSY GREENE (from 21/12/'21).
	{ Hon. EDWARD DAVIS MILLEN.
Minister for Works and Railways	{ Hon. WILLIAM ALEXANDER WATT‡
	{ Hon. LITTLETON ERNEST GROOM¶ (from 27/3/'18 to 21/12/'21).
	{ Hon. RICHARD WITTY FOSTER (from 21/12/'21).
Minister for Home and Territories	{ Hon. PATRICK McMAHON GLYNN, K.C. (to 3/2/'20).
	{ Hon. ALEXANDER POYNTON (from 4/2/'20 to 21/12/'21).
	{ Rt. Hon. GEORGE FOSTER PEARCE, P.C. (from 21/12/'21).
	{ Hon. JENS AUGUST JENSEN (to 13/12/'18).
Minister for Trade and Customs	{ Hon. WILLIAM ALEXANDER WATT‡ (from 13/12/'18).
	{ Hon. WALTER MASSY GREENE (from 17/1/'19 to 21/12/'21).
	{ Hon. ARTHUR STANISLAUS RODGERS (from 21/12/'21).
Postmaster-General	{ Hon. WILLIAM WEBSTER (to 3/2/'20).
	{ Hon. GEORGE HENRY WISE (from 4/2/'20 to 21/12/'21).
Minister for Health	{ Hon. ALEXANDER POYNTON (from 21/1/'21).
	{ Hon. WALTER MASSY GREENE (from 10/3/'21).
Vice-President Executive Council	{ Hon. LITTLETON ERNEST GROOM¶ (to 27/3/'18).
	{ Hon. EDWARD JOHN RUSSELL (from 27/3/'18 to 21/12/'21).
	{ Hon. JOHN EARLE (from 21/12/'21).
	{ Hon. EDWARD JOHN RUSSELL (to 27/3/'18).
	{ Hon. ALEXANDER POYNTON (from 26/3/'18 to 4/2/'18).
	{ Hon. GEORGE HENRY WISE (from 26/3/'18 to 4/2/'18).
	{ Hon. WALTER MASSY GREENE (from 26/3/'18 to 17/1/'19).
Honorary Ministers	{ Hon. RICHARD BEAUMONT ORCHARD (from 26/3/'18 to 31/1/'19).
	{ Hon. SIR GRANVILLE DE LAUNE RYRIE, K.C.M.G., C.B., V.D. (from 4/2/'20).
	{ Hon. WILLIAM HENRY LAIRD SMITH (from 4/2/'20 to 28/7/'20).
	{ Hon. ARTHUR STANISLAUS RODGERS (from 28/7/'20 to 21/12/'21).
	{ Hon. HECTOR LAMOND (from 21/12/'21).

* G.C.M.G., 1918. † Created Lord Forrest of Bunbury, 1918. ‡ P.C., 1920. § P.C., 1923. ¶ P.C., 1921. ¶ K.C.M.G., K.C., 1924.

(p) BRUCE-PAGE GOVERNMENT from 9th February, 1923.

DEPARTMENTS.	MINISTERS.
Prime Minister and Minister for External Affairs	Rt. Hon. STANLEY MELBOURNE BRUCE, P.C., M.C.
Treasurer	Hon. EARLE CHRISTMAS GRAFTON PAGE.
Minister for Home and Territories	Rt. Hon. GEORGE FOSTER PEARCE, P.C.
Attorney-General	Hon. SIR LITTLETON ERNEST GROOM, K.C.M.G., K.C.
Postmaster-General	Hon. WILLIAM GERRAND GIBSON.
Minister for Trade and Customs	Hon. AUSTIN CHAPMAN (to 26/5/'24).
and Minister for Health	{ Hon. HERBERT EDWARD PRATTEN (from 13/6/'24).
Minister for Works and Railways	{ Hon. PERCY GERALD STEWART (to 5/8/'24).
	{ Hon. WILLIAM CALDWELL HILL (from 26/9/'24).
	{ Hon. ERIC KENDALL BOWDEN (to 16/1/'25).
Minister for Defence	{ Hon. SIR NEVILLE REGINALD HOWSE, V.C., K.C.B., K.C.M.G. (from 16/1/'25).
	{ Hon. SIR AUSTIN CHAPMAN, K.C.M.G. (to 26/5/'24).
Minister for Health	{ Hon. HERBERT EDWARD PRATTEN (from 13/6/'24 to 16/1/'25).
	{ Hon. SIR NEVILLE REGINALD HOWSE, V.C., K.C.B., K.C.M.G. (from 16/1/'25).
Minister for Markets and Migration	Hon. REGINALD VICTOR WILSON (from 16/1/'25).
Vice-President of the Executive Council	Hon. LLEWELYN ATKINSON.
	{ Hon. REGINALD VICTOR WILSON (to 16/1/'25).
	{ Hon. THOMAS WILLIAM CRAWFORD.
Honorary Ministers	{ Hon. CHARLES WILLIAM CLANAN MARR, D.S.O., M.C., V.D. (from 16/1/'25).

A further list of the Ministers of State for the Commonwealth, arranged according to the respective offices occupied, is given in Chapter III., General Government.

3. The Course of Legislation.—The actual legislation by the Commonwealth Parliament up to the end of the 1924 session is indicated in alphabetical order in "Vol. XXII. of the Acts of the Parliament of the Commonwealth of Australia, passed during the year 1924, with Tables, Appendix, and Indexes." A "Chronological Table of Acts passed from 1901 to 1924, showing how they are affected by subsequent legislation or lapse of time" is also given, and further "A Table of Commonwealth Legislation," for the same period, "in relation to the several provisions of the Constitution," is furnished. Reference may be made to these for complete information. The nature of Commonwealth legislation up to December, 1924, and its relation to the several provisions of the Constitution, are set forth in the following tabular statement, from which Acts which have been repealed or which are no longer in force have been omitted:—

COMMONWEALTH LEGISLATION—ANALYTIC TABLE.*

Section of Constitution.	Short Title of Commonwealth Act.
	AMENDMENT OF THE CONSTITUTION.
	Constitution Alteration (Senate Elections) 1906.
	Constitution Alteration (State Debts) 1909.
	PARLIAMENTARY AND ELECTORAL LAW.
8—30	PARLIAMENTARY FRANCHISE—
	Commonwealth Electoral Act 1918–1924.
9—34	ELECTIONS—
	Commonwealth Electoral Act 1902–1911.†
	Commonwealth Electoral Act 1918–1924.
	Senate Elections Act 1903–1922.
24	DETERMINATION OF NUMBER OF MEMBERS OF HOUSE OF REPRESENTATIVES—
	Representation Act 1905.
	Northern Territory Representation Act 1922.
47	DISPUTED ELECTIONS AND QUALIFICATIONS—
	Commonwealth Electoral Act 1918–1924, ss. 183–201.

* This table has been prepared by Sir Robert Garran, Solicitor-General of the Commonwealth.

† With the exception of s. 210 of the *Commonwealth Electoral Act* 1902, and s. 18 of the *Commonwealth Electoral Act* 1905, the *Commonwealth Electoral Act* 1902–1911 has been repealed by the *Commonwealth Electoral Act* 1918. See *Commonwealth Gazette*, 25th November, 1918, p. 2257, 21st March, 1919, p. 401, and 14th November, 1920, p. 2277.

COMMONWEALTH LEGISLATION—ANALYTIC TABLE—*continued.*

Section of Constitution.	Short Title of Commonwealth Act.
	PARLIAMENTARY AND ELECTORAL LAW— <i>continued.</i>
48	ALLOWANCES TO MEMBERS— Parliamentary Allowances Act 1920.
	Northern Territory Representation Act 1922 (s. 6).
49	PRIVILEGES OF PARLIAMENT— Parliamentary Papers Act 1908.
	GENERAL LEGISLATION.
51 (i)	TRADE AND COMMERCE—EXTERNAL AND INTERSTATE— Australian Industries Preservation Act 1906–1910 [<i>Trusts and Dumping</i>]. Commerce (Trade Descriptions) Act 1905. Commonwealth Shipping Act 1923. Customs Act 1901–1923. Dairy Produce Export Control Act 1924. Dried Fruits Export Control Act 1924. Enemy Contracts Annulment Act 1915. Export Guarantee Act 1924. Meat Industry Encouragement Act 1924. Navigation Act 1912–1920. Norfolk Island Act 1913 (s. 15). Northern Territory Acceptance Act 1910–1919 (s. 13). River Murray Waters Act 1915–1923. Sea-Carriage of Goods Act 1924 [<i>Bills of Lading</i>]. Seamen's Compensation Act 1911. Secret Commissions Act 1905. Spirits Act 1906–1923. Trading with the Enemy Act 1914–1921. War Precautions Act Repeal Act 1920–1923.
(ii)	TAXATION— <i>Machinery Acts</i> — Beer Excise Act 1901–1923. Customs Act 1901–1923. Distillation Act 1901–1923. Entertainment Tax Assessment Act 1916–1924. Estate Duty Assessment Act 1914–1922. Excise Act 1901–1923. Excise Procedure Act 1907. Income Tax Assessment Act 1922–1924. Income Tax Assessment (Live Stock) Act 1924. Income Tax Collection Act 1923–1924. Land Tax Assessment Act 1910–1924. New Zealand Re-exports Act 1924. Spirits Act 1906–1923. Taxation of Loans Act 1923. War-time Profits Tax Assessment Act 1917–1924. <i>Taxing Acts</i> — Customs Tariff 1902 [<i>Section 5 and Schedule repealed by Customs Tariff 1908</i>]. Customs Tariff 1921–1924. Customs Tariff (Industries Preservation) Act 1921–1922. Customs Tariff (New Zealand Preference) 1922. Customs Tariff (New Zealand Preference) 1922 (No. 2). Customs Tariff (South African Preference) 1906; affected by <i>Customs Tariff 1908 (s. 9)*</i> and by <i>Customs Tariff 1921–1922 (s. 15)</i> . Customs Tariff (Sugar) 1922. Customs Tariff Validation Acts 1917 and 1919; affected by <i>Customs Tariff 1921 (s. 12 (2))</i> . Dairy Produce Export Charges Act 1924. Dried Fruits Export Charges Act 1924. Entertainments Tax Act 1916–1922. Estate Duty Act 1914.

* Acts whose short titles are printed in *italics* with a * have been repealed or have expired.

COMMONWEALTH LEGISLATION—ANALYTIC TABLE—*continued.*

Section of Constitution.	Short Title of Commonwealth Act.
	GENERAL LEGISLATION— <i>continued.</i>
	TAXATION— <i>continued.</i>
	<i>Taxing Acts—continued.</i>
51 (ii)	Excise Tariff 1902; amended by <i>Sugar Rebate Abolition Act 1903</i> , <i>Excise Tariff 1905*</i> , <i>Excise Tariff (Amendment) 1906*</i> , <i>Excise Tariff 1908*</i> , and <i>Excise (Sugar) 1910</i> . Excise Tariff 1921–1924. Income Tax Acts 1915, 1916, 1917, 1918, 1919, 1920, 1921, 1922, 1923, 1924. Land Tax Act 1910–1922. War-time Profits Tax Act 1917.
(iii)	BOUNTIES ON PRODUCTION OR EXPORT— Canned Fruit Export Bounty Act 1924. Cattle Export Bounty Act 1924. Iron and Steel Products Bounty Act 1922. Shale Oil Bounty Act 1917–1923. Sulphur Bounty Act 1923. Wine Export Bounty Act 1924.
(iv)	BORROWING MONEY ON THE PUBLIC CREDIT OF THE COMMONWEALTH— Audit Act 1901–1924 (ss. 55–59). Commonwealth Bank Act 1911–1924 (ss. 53–58). Commonwealth Inscribed Stock Act 1911–1918. Funding Arrangements Act 1921. Grafton to South Brisbane Railway Act 1924. Immigration Loan Act 1922. Loan Act 1911–1914; 1912–1914; 1913–1914; 1914; (No. 2) 1914; 1915; 1918; 1919; 1920; 1921; (No. 2) 1921; 1922; 1923; (No. 1) 1924; (No. 2) 1924; (No. 3) 1924. Loans Redemption and Conversion Act 1921. Loans Securities Act 1919. National Debt Sinking Fund Act 1923–1924. Oil Agreement Act 1924. Repatriation Loan Act 1921. Seat of Government (Administration) Act 1924 (s. 20). States Loan Act 1916; 1917; 1924. Sugar Purchase Act 1915–1920. Tasmanian Loan Redemption Act 1919. Taxation of Loans Act 1923. Treasury Bills Act 1914–1915. War Gratuity Acts 1920 (ss 11, 13). War Loan Act (No. 1) 1915; (No. 3) 1915; (No. 1) 1916; 1917; 1918; 1920. War Loan (United Kingdom) Act 1914–1917; 1915–1917; (No. 2) 1916. War Loan Securities Repurchase Act 1918.
(v)	POSTAL, TELEGRAPHIC, AND TELEPHONIC SERVICES— Commonwealth Electoral Act 1913–1924 (ss. 212, 213). Pacific Cable Act 1911. Post and Telegraph Act 1901–1923. Post and Telegraph Rates Act 1902–1924. Purchase Telephone Lines Acquisition Act 1911. Telegraph Act 1909. Wireless Agreement Act 1924. Wireless Telegraphy Act 1905–1919.
(vi)	NAVAL AND MILITARY DEFENCE— <i>General—</i> Air Force Act 1923. Control of Naval Waters Act 1918. Deceased Soldiers' Estates Act 1918–1919. Defence Act 1903–1918. Defence Equipment Act 1924. Defence Lands Purchase Act 1913.

* Acts whose short titles are printed in italics with a * have been repealed or have expired.

COMMONWEALTH LEGISLATION—ANALYTIC TABLE—*continued.*

Section of Constitution.	Short Title of Commonwealth Act.
	GENERAL LEGISLATION— <i>continued.</i>
	NAVAL AND MILITARY DEFENCE— <i>continued.</i>
	<i>General</i> — <i>continued.</i>
51 (vi)	Defence Retirement Act 1922. Naval Agreement Act 1903–1912. Naval Defence Act 1910–1918. Telegraph Act 1909.
	<i>War Legislation</i> —
	Australian Imperial Force Canteens Fund Act 1920. Australian Soldiers' Repatriation Act 1920–1922. Enemy Contracts Annulment Act 1915. Legal Proceedings Control Act 1919. Moratorium Act 1919. Termination of the Present War (Definition) Act 1919. Trading with the Enemy Act 1914–1921. Treaties of Peace (Austria and Bulgaria) Act 1920. Treaties of Washington Act 1922. Treaty of Peace (Germany) Act 1919–1920. Treaty of Peace (Hungary) Act 1921. War Gratuity Acts 1920. War Precautions Act Repeal Act 1920–1923. War Service Homes Act 1918–1923. War Service Homes Commission Validating Act 1921. Wheat Storage Act 1917.
(vii)	LIGHTHOUSES, LIGHTSHIPS, BEACONS AND BUOYS— Lighthouses Act 1911–1919.
(viii)	ASTRONOMICAL AND METEOROLOGICAL OBSERVATIONS— Meteorology Act 1906.
(ix)	QUARANTINE— Quarantine Act 1908–1924.
(xi)	CENSUS AND STATISTICS— Census and Statistics Act 1905–1920. Statistical Bureau (Tasmania) Act 1924.
(xii)	CURRENCY, COINAGE, AND LEGAL TENDER— Coinage Act 1909. Commonwealth Bank Act 1911–1924 (ss. 60A–60AB).
(xiii)	BANKING, OTHER THAN STATE BANKING, ETC. Commonwealth Bank Act 1911–1924.
(xiv)	INSURANCE— Life Assurance Companies Act 1905. Marine Insurance Act 1909.
(xvi)	BILLS OF EXCHANGE AND PROMISSORY NOTES— Bills of Exchange Act 1909–1912. Commonwealth Bank Act 1911–1924 (s. 29 (a)).
(xvii)	BANKRUPTCY AND INSOLVENCY— Bankruptcy Act 1924.
(xviii)	COPYRIGHT, PATENTS, DESIGNS AND TRADE MARKS— Boy Scouts Association Act 1924 (s. 3). Copyright Act 1912. Customs Act 1901–1923 (s. 52 (a), 57). Designs Act 1906–1912. Patents Act 1903–1921. Patents, Trade Marks, and Designs Act 1910. Trade Marks Act 1905–1922.
(xix)	NATURALIZATION AND ALIENS— Aliens Registration Act 1920. Immigration Act 1901–1924. Nationality Act 1920–1922. War Precautions Act Repeal Act 1920–1923.
(xx)	CORPORATIONS— Boy Scouts Association Act 1924.
(xxiii)	INVALID AND OLD-AGE PENSIONS— Invalid and Old-age Pensions Act 1908–1923.

COMMONWEALTH LEGISLATION—ANALYTIC TABLE—*continued.*

Section of Constitution.	Short Title of Commonwealth Act.
GENERAL LEGISLATION—<i>continued.</i>	
51 (xxiv)	SERVICE AND EXECUTION THROUGHOUT COMMONWEALTH OF PROCESS AND JUDGMENTS OF STATE COURTS— Service and Execution of Process Act 1901–1924.
(xxv)	RECOGNITION OF STATE LAWS, RECORDS, ETC. State Laws and Records Recognition Act 1901.
(xxvi)	PEOPLE OF ANY RACE, OTHER THAN ABORIGINAL—SPECIAL LAWS— Commonwealth Electoral Act 1918–1924 (s. 39). Invalid and Old-age Pensions Act 1908–1923 (ss. 16, 21). Pacific Island Labourers Act 1901–1906. Post and Telegraph Act 1901–1923 (s. 16).
(xxvii)	IMMIGRATION AND EMIGRATION— Contract Immigrants Act 1905. Emigration Act 1910. Immigration Act 1901–1924. Pacific Island Labourers Act 1901–1906. Passports Act 1920. War Precautions Act Repeal Act 1920–1923 (s. 9).
(xxviii)	INFLUX OF CRIMINALS— Immigration Act 1901–1924 (s. 3 (ga), (gb)).
(xxix)	EXTERNAL AFFAIRS— Extradition Act 1903. High Commissioner Act 1909. Nauru Island Agreement Act 1919. Treaties of Washington Act 1922.
(xxx)	RELATIONS WITH PACIFIC ISLANDS— Pacific Island Labourers Act 1901–1906 Nauru Island Agreement Act 1919. New Guinea Act 1920.
(xxxi)	ACQUISITION OF PROPERTY FOR PUBLIC PURPOSES— Commonwealth Railways Act 1917 (s. 63). Defence Lands Purchase Act 1913. Kalgoorlie to Port Augusta Railway Lands Act 1918–1920. Lands Acquisition Act 1906–1916 ; 1912. Lands Acquisition (Defence) Act 1918. Lighthouses Act 1911–1919 (ss. 5, 6). Northern Territory (Administration) Act 1910 (s. 9). Northern Territory Railway Extension Act 1923. Purchase Telephone Lines Acquisition Act 1911. Seat of Government Act 1908. Seat of Government Acceptance Act 1909 ; 1922. Seat of Government (Administration) Act 1910 (s. 10). War Service Homes Act 1918–1923 (s. 16).
(xxxii)	CONTROL OF RAILWAYS FOR DEFENCE PURPOSES— Defence Act 1903–1918 (ss. 64–66, 80, 124).
(xxxiv)	RAILWAY CONSTRUCTION AND EXTENSION IN ANY STATE WITH THE CONSENT OF THAT STATE— Commonwealth Railways Act 1917. Kalgoorlie to Port Augusta Railway Act 1911–1912. Kalgoorlie to Port Augusta Railway Lands Act 1918–1920. Northern Territory Railway Extension Act 1923. Grafton to South Brisbane Railway Act 1924.
(xxxv)	CONCILIATION AND ARBITRATION FOR THE PREVENTION AND SETTLEMENT OF INDUSTRIAL DISPUTES EXTENDING BEYOND THE LIMITS OF ANY ONE STATE— Arbitration (Public Service) Act 1920. Commonwealth Conciliation and Arbitration Act 1904–1921. Industrial Peace Acts 1920.
(xxxix)	MATTERS INCIDENTAL TO THE EXECUTION OF POWERS— Acts Interpretation Act 1901–1918. Acts Interpretation Act 1904–1916. Advances to Settlers Act 1923.

COMMONWEALTH LEGISLATION—ANALYTIC TABLE—*continued.*

Section of Constitution.	Short Title of Commonwealth Act.
	GENERAL LEGISLATION—<i>continued.</i>
51 (xxxix)	<p>MATTERS INCIDENTAL TO THE EXECUTION OF POWERS—<i>continued.</i></p> <p>Agreements Validation Act 1923. Air Navigation Act 1920. Amendments Incorporation Act 1905–1918. Appropriation and Supply Acts. Arbitration (Public Service) Act 1920. Committee of Public Accounts Act 1913–1920. Commonwealth Inscribed Stock Act 1911–1918. Commonwealth Public Service Act 1922–1924. Commonwealth Public Works Committee Act 1913–1921. Commonwealth Salaries Act 1907. Commonwealth Shipping Act 1923. Commonwealth Workmen's Compensation Act 1912. Crimes Act 1914–1915. Dairy Produce Export Control Act 1924. Defence Retirement Act 1922. Dried Fruits Advances Act 1924. Dried Fruits Export Control Act 1924. Evidence Act 1905. Export Guarantee Act 1924. Hop Pool Agreement Act 1924. Income Tax Collection Act 1923–1924. Institute of Science and Industry Act 1920. Jury Exemption Act 1905–1922. Main Roads Development Act 1923. Maternity Allowance Act 1912. Meat Industry Encouragement Act 1924. Oil Agreement Act 1920; 1924. Returned Soldiers' Woollen Company Loan Act 1921. Royal Commissions Act 1902–1912. Rules Publication Act 1903–1916. Solicitor-General Act 1916. South Australian Farmers' Agreement Act 1922. Statutory Declarations Act 1911–1922. Superannuation Act 1922–1924. Treaties of Washington Act 1922. War Precautions Act Repeal Act 1920–1923. Westralian Farmers' Agreement Act 1920; 1921. Zoological Museum Agreement Act 1924.</p>
	EXECUTIVE GOVERNMENT.
65	<p>NUMBER OF MINISTERS—</p> <p>Ministers of State Act 1917.</p>
67	<p>APPOINTMENT AND REMOVAL OF OFFICERS—</p> <p>Australian Soldiers Repatriation Act 1920–1922 (ss. 7–21). Commonwealth Bank Act 1911–1924 (ss. 12, 16). Commonwealth Public Service Act 1922–1924 (ss. 37–49). Commonwealth Railways Act 1917 (ss. 5–15, 46–54). Commonwealth Shipping Act 1923 (ss. 6, 11). Defence Act 1903–1918 (s. 63). High Commissioners Act 1909 (ss. 8, 9). Institute of Science and Industry Act 1920 (ss. 7, 14). National Debt Sinking Fund Act 1923–1924 (s. 6). New Guinea Act 1920 (ss. 6–12). Norfolk Island Act 1913 (ss. 7, 9). Northern Territory Acceptance Act 1910–1919 (ss. 9, 11, 12). Papua Act 1905–1924 (s. 19). Seat of Government (Administration) Act 1924 (ss. 6, 13). Solicitor-General Act 1916. Superannuation Act 1922–1924 (ss. 61–64). Tariff Board Act 1921–1924 (ss. 5–9). Trading with the Enemy Act 1914–1921 (s. 2A). War Service Homes Act 1918–1923 (ss. 5–15). War Service Homes Commissioner Validating Act 1921.</p>

COMMONWEALTH LEGISLATION—ANALYTIC TABLE—*continued.*

Section of Constitution.	Short Title of Commonwealth Act.
THE JUDICATURE.	
71-80	CONSTITUTION AND PROCEDURE OF THE HIGH COURT— High Court Procedure Act 1903-1915. Judiciary Act 1903-1920.
73	APPELLATE JURISDICTION OF THE HIGH COURT— Bankruptcy Act 1924 (s. 26). Estate Duty Assessment Act 1914-1922 (s. 28). Income Tax Assessment Act 1922-1924 (s. 51, 53). Judiciary Act 1903-1920. Land Tax Assessment Act 1910-1924 (s. 46). Norfolk Island Act 1913 (s. 11). Papua Act 1905-1924 (s. 43). War-time Profits Tax Assessment Act 1917-1924 (s. 29).
76	ORIGINAL JURISDICTION OF THE HIGH COURT— (1) <i>In matters arising under the Constitution or involving its interpretation—</i> Judiciary Act 1903-1920 (ss. 23, 30A, 88). (2) <i>In matters arising under Laws made by the Parliament—</i> Australian Industries Preservation Act 1906-1910 (ss. 10, 11, 13, 21, 22, and 26). Bankruptcy Act 1924 (s. 20 (3)). Commonwealth Conciliation and Arbitration Act 1904-1921 (s. 31). Commonwealth Electoral Act 1918-1924 (ss. 183, 202). Copyright Act 1912 (s. 37 (2)). Customs Act 1901-1923 (ss. 221, 227, 245). Defence Act 1903-1918 (s. 91). Designs Act 1906-1912 (s. 39 (3)). Estate Duty Assessment Act 1914-1922 (ss. 39-41). Excise Act 1901-1923 (ss. 109, 115, 134). Income Tax Assessment Act 1922-1924 (ss. 50-53). Industrial Peace Acts 1920. Judiciary Act 1903-1920. Land Tax Assessment Act 1910-1924 (s. 44). Lands Acquisition Act 1906-1916 (ss. 10, 11, 24, 36-39, 45, 46, 50, 54, 56, 59). Navigation Act 1912-1920 (ss. 383, 385). Patents Act 1903-1921 (ss. 47, 58, 67, 75-77, 84-87A, 111). Post and Telegraph Act 1901-1923 (ss. 29, 43.) Referendum (Constitution Alteration) Act 1906-1919 (ss. 27, 31). Trade Marks Act 1905-1922 (ss. 34, 35, 44, 45, 70-72, 95). Trading with the Enemy Act 1914-1921 (ss. 9c, 9P). War-time Profits Tax Assessment Act 1917-1924 (s. 28).
(iii)	(3) <i>In matters of Admiralty and Maritime Jurisdiction—</i> Judiciary Act 1903-1920 (ss. 30, 30A).
77 (ii)	EXCLUDING JURISDICTION OF STATE COURTS— Judiciary Act 1903-1920 (ss. 38, 38A, 39, 57, 59).
(iii)	INVESTING STATE COURTS WITH FEDERAL JURISDICTION— Bankruptcy Act 1924 (ss. 18, 19). Commonwealth Conciliation and Arbitration Act 1904-1921 (ss. 44-46, 48). Commonwealth Electoral Act 1918-1924 (ss. 58, 184). Copyright Act 1912 (ss. 14-17). Customs Act 1901-1923 (ss. 221, 227, 245). Defence Act 1903-1918 (s. 91). Designs Act 1906-1912 (ss. 25, 39). Estate Duty Assessment Act 1914-1922 (s. 24). Excise Act 1901-1923 (ss. 109, 115, 134). Income Tax Assessment Act 1922-1924 (s. 50). Judiciary Act 1903-1920 (ss. 17, 39, 68). Land Tax Assessment Act 1910-1924 (s. 44). Navigation Act 1912-1920 (ss. 91, 92, 318-320, 380-383, 385, 395). Patents Act 1903-1921 (ss. 30, 47, 58, 67, 75-77, 84-87A, 111). Post and Telegraph Act 1901-1923 (ss. 29, 43). Trade Marks Act 1905-1922 (ss. 34, 35, 44, 45). War-time Profits Tax Assessment Act 1917-1924 (s. 28).
78	RIGHT TO PROCEED AGAINST COMMONWEALTH OR STATE— Judiciary Act 1903-1920 (ss. 56-67).

COMMONWEALTH LEGISLATION—ANALYTIC TABLE—*continued.*

Section of Constitution.	Short Title of Commonwealth Act.
FINANCE.	
81	APPROPRIATION OF MONEYS— Appropriation and Supply Acts. Audit Act 1901–1924 (ss. 36–37, 62A). Funding Arrangements Act 1921. Loans Redemption and Conversion Act 1921.
83	PAYMENT OF MONEYS— Audit Act 1901–1924 (ss. 31–37, 62A).
93	CREDITING OF REVENUE AND DEBITING OF EXPENDITURE— Surplus Revenue Acts 1908, 1909, 1910.
94	DISTRIBUTION OF SURPLUS REVENUE— Surplus Revenue Acts 1908, 1909, 1910.
96	ASSISTANCE TO STATES— Tasmania Grant Act 1922; 1923; 1924.
97	AUDIT OF PUBLIC ACCOUNTS— Audit Act 1901–1924.
98	NAVIGATION AND SHIPPING— Lighthouses Act 1911–1919. Navigation Act 1912–1920. River Murray Waters Act 1915–1923. Sea-Carriage of Goods Act 1924. Seamen's Compensation Act 1911.
100	USE OF WATERS— River Murray Waters Act 1915–1923.
101–104	INTER-STATE COMMISSION— Inter-State Commission Act 1912.
THE STATES.	
118	RECOGNITION OF STATE LAWS, RECORDS, ETC. State Laws and Records Recognition Act 1901.
119	PROTECTION OF STATES FROM INVASION AND VIOLENCE— Defence Act 1903–1918 (s. 51).
TERRITORIES.	
122	GOVERNMENT OF TERRITORIES— Defence Act 1903–1918 (s. 49). Income Tax Assessment Act 1922–1924 (3, 5). Jervis Bay Territory Acceptance Act 1915. Judiciary Act 1903–1920 (ss. 11, 68 (g)). Nauru Island Agreement Act 1919. New Guinea Act 1920. Norfolk Island Act 1913. Northern Territory Acceptance Act 1910–1919. Northern Territory (Administration) Act 1910. Northern Territory Railway Extension Act 1923. Northern Territory Representation Act 1922. Papua Act 1905–1924. Patents Act 1903–1921 (s. 4A). Pine Creek to Katherine River Railway Act 1913. Pine Creek to Katherine River Railway Survey Act 1912. Removal of Prisoners (Territories) Act 1923. Seat of Government Acceptance Act 1909. Seat of Government (Administration) Act 1910; 1924. Wireless Telegraphy Act 1905–1919.
MISCELLANEOUS.	
125	SEAT OF GOVERNMENT— Seat of Government Act 1908. Seat of Government Acceptance Act 1909; 1922. Seat of Government (Administration) Act 1910; 1924.
128	ALTERATION OF CONSTITUTION— Constitution Alteration (Senate Elections) 1906. Constitution Alteration (State Debts) 1909. Referendum (Constitution Alteration) Act 1906–1919.

CHAPTER II.

PHYSIOGRAPHY.

§ 1. General Description of Australia.

1. **Geographical Position.**—(i) *General.* The Australian Commonwealth, which includes the island continent of Australia proper and the island of Tasmania, is situated in the Southern Hemisphere, and comprises in all an area of about 2,974,581 square miles, the mainland alone containing about 2,948,366 square miles. Bounded on the west and east by the Indian and Pacific Oceans respectively, it lies between longitudes 113° 9' E. and 153° 39' E., while its northern and southern limits are the parallels of latitude 10° 41' S. and 39° 8' S., or, including Tasmania, 43° 39' S. On its north are the Timor and Arafura Seas and Torres Strait, on its south the Southern Ocean and Bass Strait. The extreme points are "Steep Point" on the west, "Cape Byron" on the east, "Cape York" on the north, "Wilson's Promontory" on the south, or, if Tasmania be included, "South East Cape."

(ii) *Tropical and Temperate Regions.* Of the total area of Australia nearly 40 per cent. lies within the tropics. Assuming, as is usual, that the latitude of the Tropic of Capricorn is 23° 30' S., its correct value for 1924 is 23° 26' 57.02", and it decreases about 0.47" per annum, the areas within the tropical and temperate zones are approximately as follows:—

AUSTRALIA—AREAS OF TROPICAL AND TEMPERATE REGIONS.

(STATES AND TERRITORY PARTIALLY WITHIN TROPICS.)

Areas.	Queensland.	Western Australia.	Northern Territory.	Total.
	Sq. miles.	Sq. miles.	Sq. miles.	Sq. miles.
Within Tropical Zone	359,000	364,000	426,320	1,149,320
Within Temperate Zone	311,500	611,920	97,300	1,020,720
Ratio of Tropical part to whole State ..	0.535	0.373	0.814	0.530
Ratio of Temperate part to whole State	0.465	0.627	0.186	0.470

Thus the tropical part is roughly about one-half (0.530) of the three territories mentioned above, or about five-thirteenth of the whole of Australia (0.386).

2. **Area of Australia compared with Areas of other Countries.**—It is not always realized that the area of Australia is nearly as great as that of the United States of America, that it is four-fifths of that of Canada, that it is over one-fifth of the area of the whole of the British Empire, that it is more than three-fourths of the whole area of Europe, and that it is about 25 times as large as Great Britain and Ireland or Italy. This great area, coupled with a limited population, renders the solution of the problem of Australian development a particularly difficult one. The areas of Australia and of other countries are given in the following table:—

AREA OF AUSTRALIA AND OF OTHER COUNTRIES.

Country.	Area.	Country.	Area.
Continental Divisions—	Sq. miles.	Asia—	Sq. miles.
Europe	3,854,145	Russia	5,460,390
Asia	15,972,271	China and Dependencies ..	4,277,170
Africa	12,413,292	British India and Adminis- tered Territories	1,094,300
North and Central America and West Indies	8,604,072	Arabia	1,000,000
South America	7,316,764	Feudatory Indian States ..	711,032
Australasia and Polynesia ..	3,464,891	Persia	628,000
		Dutch East Indies	572,950
Total, exclusive of Arctic and Antarctic Conts. ..	51,625,435	Turkey	483,656
		Japan (and Dependencies) ..	260,738
Europe—		Afghanistan	245,000
Russia	1,680,730	Siam	200,148
France	212,659	Iraq (Mesopotamia)	143,250
Spain	194,800	Philippine Islands	115,026
Germany	182,213	Laos	96,500
Sweden	173,105	Oman	82,000
Poland	149,359	Bokhara	79,440
Finland	132,550	British Borneo, Brunei, and Sarawak	77,106
Norway	124,964	Syria	60,000
Rumania	122,282	Cambodia	57,900
Italy and annexed Pro- vinces	117,982	Nepal	54,000
Serb, Croat, and Slovene State	96,134	Tonking	40,530
Great Britain and Northern Ireland	94,633	Annam	39,758
Lithuania	59,633	Federated Malay States ..	27,506
Czecho-Slovakia	54,191	Ceylon	25,332
Bulgaria	39,824	Khiva	24,310
Iceland	39,709	Malay Protectorate (inc. Johore)	23,486
Hungary	35,921	Cochin China	22,000
Portugal	35,490	Bhutan	20,000
Azerbaijan	33,970	Armenia	15,240
Greece	33,378	Aden and Dependencies ..	9,000
Austria	32,396	Palestine	9,000
Irish Free State	27,000	Timor, etc. (Portuguese In- dian Archipelago)	7,330
Georgia	25,760	Cyprus	3,584
Latvia	25,000	Goa, Damao, and Diu ..	1,638
Spitzbergen, Bear and ad- jacent islands	25,000	Straits Settlements	1,600
Albania	17,374	Sokotra	1,382
Denmark	17,144	Kwantung	538
Estonia	16,955	Hong Kong and Dependen- cies	391
Switzerland	15,975	Wei-hai-wei	285
Netherlands	13,205	Bahrein Islands	250
Belgium	11,752	French India (Pondicherry, etc.)	196
Turkey	10,882	Kwang Chau Wan	190
Luxemburg	999	Maldiv Islands	115
Danzig	754	Macao, etc.	4
Andorra	191		
Malta	118	Total, Asia	15,972,271
Liechtenstein	65		
San Marino	38	Africa—	
Monaco	8	French Sahara	1,544,000
Gibraltar	2	Anglo-Egyptian Sudan ..	1,014,400
		French Equatorial Africa ..	982,049
Total, Europe	3,854,145		

AREA OF AUSTRALIA AND OF OTHER COUNTRIES—*continued.*

Country.	Area.	Country.	Area.
SOUTH AMERICA—<i>continued.</i>	Sq. miles.	AUSTRALASIA AND POLYNESIA	Sq. miles.
Venezuela	398,594	— <i>continued.</i>	
Chile	289,828	British Solomon Islands ..	11,000
Ecuador	174,155	New Caledonia and Depen-	
British Guiana	89,480	dencies	8,548
Uruguay	72,153	Fiji	7,983
Paraguay	61,647	Hawaii	6,449
Dutch Guiana	54,291	New Hebrides	5,700
Panama	32,380	French Establishments in	
French Guiana	32,000	Oceania	1,520
Falkland Islands and		Territory of Western Samoa	1,250
South Georgia	5,618	Gilbert and Ellice Islands	1,011
Panama Canal Zone ..	527	Marianne, Caroline, and	
		Marshall Islands	960
Total, South America ..	7,316,764	Tonga	385
		Guam	210
Australasia and Polynesia—		Samoa (U.S.A. part) ..	77
Commonwealth of Australia	2,974,581	Norfolk Island	13
Dutch New Guinea	160,692	Nauru Island	10
New Zealand and Depen-			
dencies	103,862	Total, Australasia and	
Territory of New Guinea	91,000	Polynesia	3,464,891
Papua	90,540		
		British Empire	13,406,145

The figures quoted in the table have, in most cases, been extracted from the Statesman's Year-Book for 1924.

3. Areas of Political Subdivisions.—As already stated, Australia consists of six States and the Northern and Federal Capital Territories. The areas of these, and their proportions of the total of Australia, are shown in the following table :—

AUSTRALIA—AREA OF STATES AND TERRITORIES.

State or Territory.	Area.	Percentage on Total.
	Sq. miles.	
New South Wales	309,432	10.40
Victoria	87,884	2.96
Queensland	670,500	22.54
South Australia	380,070	12.78
Western Australia	975,920	32.81
Tasmania	26,215	0.88
Northern Territory	523,620	17.60
Federal Capital Territory ..	940	0.03
Total	2,974,581	100.00

4. **Coastal Configuration.**—(i) *General.* There are no striking features in the configuration of the coast; the most remarkable indentations are the Gulf of Carpentaria on the north, and the Great Australian Bight on the south. The Cape York Peninsula on the extreme north is the only other remarkable feature in the outline. In Year Book No. 1, an enumeration of the features of the coast-line of Australia was given (see pp. 60 to 68).

(ii) *Coast-line.* The lengths of coast-line, exclusive of minor indentations, of each State and of the whole continent, and the area per mile of coast-line, are shown in the following table :—

AUSTRALIA—COAST LINE AND AREA PER MILE THEREOF.

State.	Coast-line.	Area ÷ Coast-line.	State.	Coast-line.	Area ÷ Coast-line.
	Miles.	Sq. miles.		Miles.	Sq. miles.
New South Wales(a)	700	443	South Australia	1,540	247
Victoria ..	680	129	Western Australia	4,350	224
Queensland ..	3,000	223	Continent (b) ..	11,310	261
Northern Territory	1,040	503	Tasmania ..	900	29

(a) Including Federal Capital Territory.

(b) Area 2,948,366 square miles.

For the entire Commonwealth of Australia this gives a coast-line of 12,210 miles and an average of 244 square miles for one mile of coast-line. According to Strelbitski, Europe has only 75 square miles of area to each mile of coast-line, and, according to recent figures, England and Wales have only one-third of this, viz., 25 square miles.

(iii) *Historical Significance of Coastal Names.* It is interesting to trace the voyages of some of the early navigators by the names bestowed by them on various coastal features—thus Dutch names are found on various points of the Western Australian coast, in Nuyts' Archipelago, in the Northern Territory and in the Gulf of Carpentaria; Captain Cook can be followed along the coasts of New South Wales and Queensland; Flinders' track is easily recognised from Sydney southwards, as far as Cape Catastrophe, by the numerous Lincolnshire names bestowed by him; and the French navigators of the end of the eighteenth and the beginning of the nineteenth century have left their names all along the Western Australian, South Australian, and Tasmanian coasts.

5. **Geographical Features of Australia.**—In each of the earlier issues of this Year Book fairly complete information has been given concerning some special geographical element. The nature of this information and its position in the various Year Books can be readily ascertained on reference to the special index following the index to maps and graphs at the end of this work.

6. **Fauna, Flora, Geology, and Seismology of Australia.**—Special articles dealing with these features have appeared in previous Year Books, but limits of space naturally preclude their repetition in each volume. As pointed out in 5 *supra*, however, the nature and position of these articles can be readily ascertained from the special index.

§ 2. Climate and Meteorology of Australia.*

1. **Introductory.**—In preceding Year Books some account was given of the history of Australian meteorology, including reference to the development of magnetic observations and the equipment for the determination of various climatological records. (See Year Book No. 3, pp. 79, 80.) In Year Book No. 4, pp. 84 and 87, will be found a short sketch of the creation and organization of the Commonwealth Bureau of Meteorology, and a résumé of the subjects dealt with at the Meteorological Conference of 1907. Space will not permit of the inclusion of this matter in the present issue.

2. **Meteorological Publications.**—The following publications are issued daily from the Central Meteorological Bureau, viz.:—(i) Weather charts. (ii) Rainfall maps.

* Prepared from data supplied by the Commonwealth Meteorologist, H. A. Hunt, Esquire, P.R. Met. Soc.

(iii) Bulletins, Victorian and Interstate, showing pressure, temperature, wind, rain, cloud extent, and weather. Similar publications are also issued from the divisional offices in each of the State Capitals.

Commencing with January, 1910, the "Australian Monthly Weather Report," containing statistical records from representative selected stations, with rain maps and diagrams, etc., is being published. Complete rainfall and other climatological data are published in volumes of meteorological statistics for each State separately.

The first text book of Australian meteorology, "Climate and Weather of Australia," was published in 1913.

In addition, fifteen Bulletins of Climatology have been published, particulars of which are given in preceding issues of the Official Year Book (see No. 12, page 54).

3. General Description of Australia.—A considerable portion (0.530) of three divisions of Australia is north of the tropic of Capricorn—that is to say, within the States of Queensland and Western Australia, and the Northern Territory, no less than 1,149,320 square miles belong to the tropical zone, and 1,020,720 to the temperate zone. The whole area of Australia within the temperate zone, however, is 1,825,261 square miles; thus the tropical part is about 0.386, or about five-thirteenths of the whole, or the "temperate" region is half as large again as the "tropical" (more accurately 1.591). By reason of its insular geographical position, and the absence of striking physical features, Australia is, on the whole, less subject to extremes of weather than are regions of similar area in other parts of the globe; and latitude for latitude Australia is, on the whole, more temperate.

The altitudes of the surface of Australia range up to a little over 7,300 feet, hence its climate embraces a great many features, from the characteristically tropical to what is essentially alpine, a fact indicated in some measure by the name Australian Alps given to the southern portion of the great Dividing Range.

On the coast, the rainfall is often abundant and the atmosphere moist, but in some portions of the interior it is very limited, and the atmosphere dry. The distribution of forest, therefore, with its climatic influence, is very uneven. In the interior, in places, there are fine belts of trees, but there are large areas also which are treeless, and where the air is hot and parching in summer. Again, on the coast, even so far south as latitude 35°, the vegetation is tropical in its luxuriance, and to some extent also in character. Climatologically, therefore, Australia may be said to present a great variety of features.

4. Meteorological Divisions.—(i) *General.* The Commonwealth Meteorologist has divided Australia, for climatological and meteorological purposes, into five divisions. The boundaries between these may be thus defined:—(a) Between divisions I. and II., the boundary between South and Western Australia, viz., the 129th meridian of east longitude; (b) between divisions II. and III., a line starting at the Gulf of Carpentaria, along the Norman River to Normanton, thence a straight line to Wilcannia on the Darling River, New South Wales; (c) between divisions II. and IV., a line from Wilcannia along the Darling River to its junction with the Murray; (d) between divisions II. and V., a line from the junction of the Darling and Murray Rivers, along the latter to Encounter Bay; (e) between divisions III. and IV., a line starting at Wilcannia, along the Darling, Barwon, and Dumaresq Rivers to the Great Dividing Range, and along that range and along the watershed between the Clarence and Richmond Rivers to Evans Head on the east coast of Australia; (f) between divisions IV. and V., a line from the junction of the Darling and Murray Rivers along the latter to its junction with the Murrumbidgee, along the Murrumbidgee to the Tumut River, and along the Tumut River to Tumut, thence a straight line to Cape Howe; (g) Tasmania is included in division V.

The population included within these boundaries at the Census of the 4th April, 1921, was approximately as follows:—

Division	I.	II.	III.	IV.	V.
Population	332,000	500,000	824,000	1,915,000	1,866,000

In these divisions, the order in which the capitals occur is as follows:—(a) Perth, (b) Adelaide, (c) Brisbane, (d) Sydney, (e) Melbourne, and (f) Hobart; and the climatological and meteorological statistics relating to the capital cities are dealt with herein in accordance with that order.

(ii) *Special Climatological Stations.* The latitudes, longitudes, and altitudes of special stations, the climatological features of which are graphically represented hereinafter, are as follows :—

SPECIAL CLIMATOLOGICAL STATIONS—AUSTRALIA.

Locality.	Height above Sea Level.	Latitude. S.	Longitude. E.	Locality.	Height above Sea Level.	Latitude. S.	Longitude. E.
	Feet.	deg. min.	deg. min.		Feet.	deg. min.	deg. min.
Perth ..	197	31 57	115 50	Darwin ..	97	12 28	130 51
Adelaide ..	140	34 56	138 35	Daly Waters	691	16 16	133 23
Brisbane ..	137	27 28	153 2	Alice Springs	1,926	23 38	133 37
Sydney ..	138	33 52	151 12	Dubbo ..	870	32 18	148 35
Melbourne ..	115	37 49	144 58	Laverton, W.A.	1,530	28 40	122 23
Hobart ..	177	42 53	147 20	Coolgardie ..	1,389	30 57	121 10

5. *Temperatures.*—(i) *Comparisons with other Countries.* In respect of Australian temperatures generally, it may be pointed out that the isotherm for 70° Fahrenheit extends in South America and South Africa so far south as latitude 33°, while in Australia it reaches only so far south as latitude 30°, thus showing that, on the whole, Australia has latitude for latitude a more temperate climate than other places in the Southern Hemisphere.

The comparison is even more favourable when the Northern Hemisphere is included, for in the United States the 70° isotherm extends in several of the western States so far north as latitude 41°. In Europe, the same isotherm reaches almost to the southern shores of Spain, passing, however, afterwards along the northern shores of Africa till it reaches the Red Sea, when it bends northward along the eastern shore of the Mediterranean till it reaches Syria. In Asia, nearly the whole of the land area south of latitude 40° N. has a higher temperature than 70°.

The extreme range of shade temperatures in summer and winter in a very large part of Australia amounts to probably only 81°. In Siberia, in Asia, the similar range is no less than 171°, and in North America 153°, or approximately double the Australian range.

Along the northern shores of Australia the temperatures are very equable. At Darwin, for example, the difference in the means for the hottest and coldest months is only 8.3°, and the extreme readings for the year, or the highest maximum in the hottest month and the lowest reading in the coldest month, show a difference of under 50°.

Coming southward, the extreme range of temperature increases gradually on the coast, and in a more pronounced manner inland.

(ii) *Hottest and Coldest Parts.* A comparison of the temperatures recorded at coast and inland stations shows that, in Australia, as in other continents, the range increases with increasing distance from the coast.

In the interior of Australia, and during exceptionally dry summers, the temperature occasionally reaches or exceeds 120° in the shade, and during the dry winters the major portion of the country to the south of the tropics is subject to ground frosts. An exact knowledge of temperature disposition cannot be determined until the interior becomes more settled, but from data procurable it would appear that the hottest area of the continent is situated in the northern part of Western Australia about the Marble Bar and Nullagine goldfields, where the maximum shade temperature during the summer sometimes exceeds 100° continuously for days and weeks. The coldest part of Australia is the extreme south-east of New South Wales and extreme east of Victoria—the region of the Australian Alps. Here the temperature seldom, if ever, reaches 100°, even in the hottest of seasons.

Tasmania as a whole enjoys a most moderate and equable range of temperature throughout the year, although occasionally hot winds may cross the Straits and cause the temperature to rise to 100° in the low-lying parts.

(iii) *Monthly Maximum and Minimum Temperatures.* The normal monthly maximum and minimum temperatures can be best shown by means of graphs, which exhibit the

nature of the fluctuation of each for all available years. In the diagram herein for nine representative places in Australia, the upper heavy curves show the mean maximum, and the lower heavy curves the mean minimum temperatures based upon daily observations, while the other curves show the humidities.

6. Humidity.—After temperature, humidity is the most important element of climate, as regards its effect on human comfort, rainfall supply, and in connexion with engineering problems generally.

In this publication the *absolute humidity* has been graphically represented in the form of inches of vapour pressure (i.e. that portion of the barometric pressure due to vapour). It is this total quantity of moisture in the air which affects personal comfort, plays an important part in varying the density of the atmosphere, and in heating and refrigerating processes. The more commonly quoted value, called the *relative humidity*, refers to the ratio which the actual moisture contents of the air bear to the total amount possible if saturation existed at the given temperature, and is usually quoted as a percentage. The relative humidity is an important factor in all drying operations, but is much less important than the absolute humidity as affecting animal life.

The mean monthly vapour pressure has also been added to the tables of climatological data for the capital cities on pp. 72 to 77.

The normal monthly values of vapour pressure, it should be noted, combine to make the annual curve for this element which is comparable with the maximum and minimum temperature curves, but the relative humidities consisting as they do of the extremes for each month, do not show the normal annual fluctuation which would be about midway between the extremes.

The order of stations in descending values of vapour pressure is Darwin, Daly Waters, Brisbane, Sydney, Perth, Adelaide, Melbourne, Hobart and Alice Springs, while the relative humidity diminishes in the order, Sydney, Hobart, Darwin, Brisbane, Melbourne, Perth, Adelaide, Daly Waters and Alice Springs.

7. Evaporation.—(i) *General.* The rate and quantity of evaporation in any territory is influenced by the prevailing temperature, and by atmospheric humidity, pressure, and movement. In Australia, the question is of perhaps more than ordinary importance, since in its drier regions water has often to be conserved in "tanks"* and dams. The magnitude of the economic loss by evaporation will be appreciated from the tabular records herein, which show that the yearly amount varies from about 32 inches at Hobart to 94 inches at Alice Springs in the centre of the Continent. Over the *inland* districts of the Continent it has been calculated that evaporation equals the rainfall where the annual totals are about 36 inches, the variations above and below this quantity being inverse.

(ii) *Monthly Evaporation Curves.* The curves showing the mean monthly evaporation in various parts of Australia disclose how characteristically different are the amounts for the several months in different localities. The evaporation for representative places is shown on the diagram herein.

(iii) *Loss by Evaporation.* In the interior of Australia the possible evaporation is greater than the actual rainfall. Since the loss by evaporation depends largely on the exposed area, tanks and dams so designed that the surface shall be a minimum are advantageous. Further, the more protected from the direct rays of the sun and from winds, by means of suitable tree planting, the less will be the loss by evaporation. These matters are naturally of more than ordinary concern in the drier districts of Australia.

8. Rainfall.—(i) *General.* As even a casual reference to climatological maps indicating the distribution of rainfall and prevailing direction of wind would clearly show, the rainfall of any region is determined mainly by the direction and route of the prevailing winds, by the varying temperatures of the earth's surface over which they blow, and by the physiographical features generally.

Australia lies within the zones of the south-east trades and prevailing westerly winds. The southern limit of the south-east trade strikes the eastern shores at about 30° south latitude, and, with very few exceptions, the heaviest rains of the Australian continent are precipitated along the Pacific slopes to the north of that latitude, the varying quantities being more or less regulated by the differences in elevation of the shores and of the chain of mountains upon which the rain-laden winds blow from the New South Wales northern

* In Australia, artificial storage ponds or reservoirs are called "tanks."

border to Thursday Island. The converse effect is exemplified on the north-west coast of Western Australia, where the prevailing winds, blowing from the interior of the continent instead of from the ocean, result in the lightest coastal rain in Australia.

The westerly winds, which skirt the southern shores, are responsible for the very reliable, although generally light to moderate, rains enjoyed by the south-western portion of Western Australia, by the south-eastern agricultural areas of South Australia, by a great part of Victoria, and by the whole of Tasmania.

(ii) *Factors determining Distribution and Intensity of Rainfall.* (iii) *Time of Rainfall.* In Official Year Book No. 6 (see pp. 72 to 74) some notes were given of the various factors governing the distribution, intensity, and period of Australian rainfall.

(iv) *Wettest and Driest Regions.* The wettest known part of Australia is on the north-east coast of Queensland, between Port Douglas and Cardwell, where three stations situated on, or adjacent to, the Johnstone and Russell Rivers have an average annual rainfall of between 144 and 165 inches. The maximum and minimum falls there are:—Goondi, 241.53 in 1894 and 67.88 inches in 1915, or a range of 173.65 inches; Innisfail, 211.24 in 1894 and 69.87 inches in 1902, or a range of 141.37 inches; Harvey Creek, 254.77 in 1921 and 80.47 inches in 1902, or a range of 174.30 inches.

On four occasions more than 200 inches have been recorded at Goondi, the last of these being in 1910, when 204.82 inches were registered. The record at this station covers a period of 32 years.

Harvey Creek, in the shorter period of 24 years has three times exceeded 200 inches, the total for 1921 being 254.77 inches, and at the South Johnstone Sugar Experiment Station, where a gauge has recently been established; 202.52 inches were recorded in 1921.

The driest known part of the continent is about the Lake Eyre district in South Australia (the only part of the continent below sea level), where the annual average is but 5 inches, and where the fall rarely exceeds 10 inches for the twelve months.

The inland districts of Western Australia were at one time regarded as the driest part of Australia, but authentic observations in recent years over the settled districts in the east of that State show that the annual average is from 10 to 12 inches.

(v) *Quantities and Distribution of Rainfall.* The departure from the normal rainfall increases greatly and progressively from the southern to the northern shores of the continent, and similarly also at all parts of the continent subject to capricious monsoonal rains, as the comparisons hereunder will show. The general distribution is best seen from the rainfall map herein which shows the areas subject to average annual rainfalls lying between certain limits. The areas enjoying varying quantities of rainfall determined from the latest available information are shown in the following table:—

AVERAGE ANNUAL RAINFALL DISTRIBUTION.

Average Annual Rainfall.	N.S.W. (a)	Victoria.	Queens- land.	South Australia.	Northern Territory	Western Australia.	Tas. mania. (b)	Total. (b)
	sqr. mls.	sqr. mls.	sqr. mls.	sqr. mls.	sqr. mls.	sqr. mls.	sqr. mls.	sqr. mls.
Under 10 inches	44,997	nil	91,012	317,600	138,190	513,653	nil	1,105,452
10—15 "	77,268	19,912	87,489	33,405	141,570	232,815	nil	592,459
15—20 "	57,639	12,626	112,738	14,190	62,920	89,922	937	350,972
20—30 "	77,202	29,317	213,779	13,827	93,470	95,404	7,559	530,558
30—40 "	30,700	14,029	69,880	984	40,690	40,750	4,588	201,621
Over 40 "	22,566	12,000	95,602	64	46,780	3,376	10,101	190,489
Total area ..	310,372	87,884	670,500	380,070	523,620	975,920	26,215	2,974,581

(a) Including Federal Capital Territory. (b) Over an area of 3,030 square miles no records are available.

Referring first to the capital cities, the complete records of which are given in the next table, it will be seen that Sydney, with a normal rainfall of 47.73 inches, occupies the chief place; Brisbane, Perth, Melbourne, Hobart and Adelaide following in that order, Adelaide with 21.20 inches being the driest. The extreme range from the wettest to the driest year is greatest at Brisbane (72.09 inches) and least at Adelaide (19.48 inches).

In order to show how the rainfall is distributed throughout the year in various parts of the continent, the figures of representative towns have been selected. (See map.)

The figures for Darwin, typical of the Northern Territory, show that nearly the whole of the rainfall occurs there in the summer months, while little or none falls in the middle of the year. The figures for Perth, as representing the south-western part of the continent, are the reverse, for while the summer months are dry, the winter ones are very wet. In Melbourne and Hobart the rain is fairly well distributed throughout the twelve months, with a maximum in October for the former, and in November for the latter. The records at Alice Springs and Daly Waters indicate that in the central parts of Australia the wettest months are in the summer and autumn. In Queensland, as in the Northern Territory, the heaviest rains fall in the summer months, but good averages are also maintained during the other seasons.

On the coast of New South Wales, the first six months of the year are the wettest, with a maximum in the autumn; the averages during the last six months are fair, and moderately uniform. Generally it may be said that approximately one-third of the area of the continent, principally in the eastern and northern parts, enjoys an annual average rainfall of from 20 to 50 or more inches, the remaining two-thirds averaging from about 10 to 20 inches.

(vi) *Curves of Rainfall and Evaporation.* The relative amounts of rainfall and evaporation at different times through the year are clearly indicated in the graphs herein. Inspection thereof will show how large is the evaporation when water is fully exposed to the direct rays of the sun and to wind.

(vii) *Tables of Rainfall.* The table of rainfall for a long period of years for each of the various Australian capitals affords information as to the variability of the fall in successive years, and the list of the more remarkable falls furnishes information as to what may be expected on particular occasions. As pointed out in 4 *ante*, the capitals are dealt with in the order in which they occur in the adopted meteorological divisions.

RAINFALL—AUSTRALIAN CAPITAL CITIES, 1901 TO 1924.

Year.	PERTH.			ADELAIDE.			BRISBANE.			SYDNEY.			MELBOURNE.			HOBART.		
	Amount.	No. of Days.	10 Years' Means.	Amount.	No. of Days.	10 Years' Means.	Amount.	No. of Days.	10 Years' Means.	Amount.	No. of Days.	10 Years' Means.	Amount.	No. of Days.	10 Years' Means.	Amount.	No. of Days.	10 Years' Means.
	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.
1901	36.75	122	..	18.01	124	..	38.48	110	..	40.10	149	..	27.45	113	..	25.11	149	..
2	27.06	93	..	18.02	123	..	16.17	87	..	43.07	180	..	23.08	102	..	21.85	150	..
3	35.69	140	..	25.47	134	..	49.27	136	..	38.62	173	..	28.43	130	..	25.86	139	..
4	34.35	125	..	20.31	117	..	33.23	124	..	45.93	158	..	29.72	128	..	22.41	139	..
5	34.61	116	..	22.28	131	..	36.76	108	..	35.03	145	..	25.64	129	..	32.09	168	..
6	32.37	121	..	26.51	127	..	42.85	125	..	31.89	160	..	22.29	114	..	23.31	155	..
7	40.12	132	..	17.78	125	..	31.46	119	..	31.32	132	..	22.26	102	..	25.92	166	..
8	30.52	106	34.05	24.56	125	21.15	44.01	125	36.55	45.65	167	43.41	17.72	130	25.36	16.50	148	23.29
9	39.11	107	..	27.69	138	..	34.06	111	..	32.45	177	..	25.66	171	..	27.29	170	..
1910	37.02	135	..	24.62	116	..	49.00	133	..	46.91	160	..	24.61	167	..	25.22	205	..
11	23.38	108	..	15.99	127	..	35.21	128	..	50.24	155	..	36.61	168	..	26.78	193	..
12	27.85	123	..	19.57	116	..	41.30	114	..	47.51	172	..	20.37	157	..	23.14	181	..
13	38.28	141	..	18.16	102	..	40.81	115	..	57.70	141	..	21.17	157	..	19.36	165	..
14	20.21	128	..	11.39	91	..	33.99	141	..	56.42	149	..	18.57	129	..	15.42	154	..
15	43.61	164	..	19.38	117	..	25.66	93	..	34.83	117	..	20.95	167	..	20.91	196	..
16	35.16	128	..	28.16	142	..	52.80	136	..	44.91	161	..	38.04	170	..	43.39	203	..
17	45.64	146	..	28.90	153	..	40.92	127	..	52.40	151	..	30.57	171	..	30.62	214	..
18	39.58	138	34.98	17.41	107	21.13	24.95	121	37.87	42.99	149	46.64	27.13	160	26.39	26.04	179	25.82
19	30.66	120	..	17.21	108	..	19.36	96	..	58.71	152	..	24.89	141	..	22.48	153	..
20	40.35	124	..	26.70	119	..	39.72	122	..	43.42	159	..	28.27	162	..	18.00	182	..
21	41.09	135	..	22.64	100	..	54.31	167	..	43.34	140	..	29.76	154	..	18.04	159	..
22	31.86	135	..	23.20	117	..	35.82	109	..	39.35	136	..	25.02	151	..	28.27	189	..
23	44.47	134	..	29.79	139	..	23.27	93	..	37.01	123	..	22.64	158	..	32.93	198	..
24	33.79	119	..	23.44	143	..	41.08	114	..	37.01	136	..	36.48	171	..	28.76	197	..
Aver.	34.08	119	..	21.20	124	..	44.98	128	..	47.73	153	..	26.31	137	..	23.83	148	..
No. of Yrs.	49	49	..	86	86	..	75	65	..	85	85	..	81	69	..	82	82	..

NOTE.—The above average rainfall figures for Brisbane, Sydney, and Melbourne differ slightly from the mean annual falls given in the Climatological Tables, which are for a less number of years. Annual totals from 1860 to 1900 inclusive will be found in Official Year Book No. 15, page 53.

9. Remarkable Falls of Rain.—The following are the more remarkable falls of rain in the various States and in the Northern Territory, which have occurred within a period of twenty-four hours. In New South Wales and Queensland falls of less than 15 inches in the twenty-four hours are not included. Reference, however, to them may be found in preceding Official Year Books (see No. 14, pp. 60–63) :—

HEAVY RAINFALLS—NEW SOUTH WALES, UP TO 1924, INCLUSIVE.

Name of Town or Locality.	Date.	Amnt.	Name of Town or Locality.	Date.	Amnt.
		ins.			ins.
Anthony ..	28 Mar., 1887	17.14	Madden's Creek ..	13 Jan., 1911	18.68
Bega ..	27 Feb., 1919	17.88	Morpeth ..	9 Mar., 1893	21.52
Broger's Creek ..	14 „, 1898	20.05	Mount Kembla ..	13 Jan., 1911	18.25
„ „ ..	13 Jan., 1911	20.83	Numbugga ..	27 Feb., 1919	17.87
Bulli Mountain ..	13 Dec., 1898	17.14	Tongarra Farm ..	14 „, 1898	15.12
Burrigate ..	27 „, 1919	16.38	Towamba ..	5 Mar., 1893	20.00
Candelo ..	27 Feb., „	18.58	South Head (near		
Condong ..	27 Mar. 1887	18.66	Sydney) ..	29 Apr., 1841	20.12
Cordeaux River ..	14 Feb., 1898	22.58	„ „ ..	16 Oct., 1844	20.41
Kembla Heights ..	13 Jan., 1911	17.46			

HEAVY RAINFALLS—QUEENSLAND, UP TO 1924, INCLUSIVE.

Name of Town or Locality.	Date.	Amnt.	Name of Town or Locality.	Date.	Amnt.
		ins.			ins.
Anglesey ..	26 Dec., 1909	18.20	Flying Fish Point	31 Jan., 1913	16.10
Atherton (Cairns) ..	31 Jan., 1913	16.69	Gladstone ..	4 Feb., 1911	18.83
Babinda (Cairns) ..	1 Feb., „	20.51	Glen Boughton ..	5 Apr., 1894	18.50
„ „ ..	24 Jan., 1916	22.30	Goldsborough		
„ „ ..	21 Apr., 1920	16.05	(Cairns) ..	31 Jan., 1913	19.92
Babinda ..	25 Mar., 1921	15.76	Goondi Mill (Innis-		
Bloomsbury ..	14 Feb., 1893	17.40	fail) ..	6 Apr., 1894	15.69
„ „ ..	10 Jan., 1901	16.62	„ „ ..	29 Dec., 1903	17.83
Brisbane ..	21 „, 1887	18.31	„ „ ..	10 Feb., 1911	17.68
Buderim Mountain	11 „, 1898	26.20	„ „ ..	6 Apr., 1912	15.55
Bundaberg ..	16 „, 1913	16.94	Goondi ..	30 Jan., 1913	24.10
Burnett Head			Goorganga ..	23 „, 1918	18.17
(Bundaberg) ..	16 „, 1913	15.22	Halifax ..	5 Feb., 1899	15.37
Cairns ..	11 Feb., 1911	15.17	„ „ ..	6 Jan., 1901	15.68
„ „ ..	2 Apr., „	20.16	Hambledon Mill ..	2 „, 1911	18.61
Carbrook ..	23 Jan., 1918	22.66	„ „ ..	1 Apr., „	19.62
„ „ ..	24 „, „	15.77	„ „ ..	30 Jan., 1913	17.32
Cardwell ..	18 Mar., 1904	18.24	Hampden ..	23 Apr., 1918	17.30
Carmilla ..	23 Jan., 1918	15.92	„ „ ..	24 „, „	17.19
Clare ..	26 „, 1896	15.30	Harvey Creek ..	8 Mar., 1899	17.72
Collaroy ..	23 „, 1918	18.06	„ „ ..	11 Jan., 1905	16.96
Crohamhurst			„ „ ..	3 „, 1911	27.75
(Blackall Range)	2 Feb., 1893	35.71	„ „ ..	2 Apr., „	16.46
„ „ ..	9 Jan., 1898	19.55	„ „ ..	31 Jan., 1913	24.72
„ „ ..	6 Mar., „	16.01	„ „ ..	25 Mar., 1921	15.80
Croydon ..	29 Jan., 1908	15.00	„ „ ..	12 Mar., 1924	16.50
Dungeness ..	16 Mar., 1893	22.17	„ „ ..	13 Mar., „	15.78
Dunira ..	9 Jan., 1898	18.45	Houghton Valley ..	26 Jan., 1896	18.10
„ „ ..	6 Mar., „	15.95	Holmwood (Wood-		
Fairymead Planta-			ford) ..	2 Feb., 1893	16.19
tion (Bundaberg)	16 Jan., 1913	15.32	Howard ..	15 Jan., 1905	19.55
Flying Fish Point	7 Apr., 1912	16.06	Huntley ..	27 Dec., 1916	18.94

HEAVY RAINFALLS—QUEENSLAND—*continued.*

Name of Town or Locality.	Date.	Amnt.	Name of Town or Locality.	Date.	Amnt.
		ins.			ins.
Innisfail (formerly Geraldton) ..	11 Feb., 1889	17.13	Mourilyan ..	11 Feb., 1911	17.40
" " ..	6 Apr., 1894	16.02	" " ..	7 Apr., 1912	18.97
" " ..	24 Jan., 1900	15.22	" " ..	31 Jan., 1913	15.05
" " ..	29 Dec., 1903	21.22	Mundoolun ..	21 " 1887	17.95
" " ..	2 Apr., 1911	15.00	Nambour ..	9 " 1898	21.00
" " ..	7 " 1912	20.50	" " ..	27 Dec., 1909	16.80
" " ..	31 Jan., 1913	20.91	Netherdale ..	22 Jan., 1918	19.50
Kamerunga (Cairns)	2 Apr., 1911	21.00	Oxenford ..	14 Mar., 1908	15.65
" " ..	31 Jan., 1913	16.00	Palmwoods ..	10 Jan., 1898	15.85
Koumala ..	23 " 1918	22.31	" " ..	25 Dec., 1909	17.75
" " ..	24 " " 1918	20.65	Pialba (Marybor'gh)	16 Jan., 1913	17.22
Kuranda (Cairns) ..	11 Feb., 1911	16.30	Plane Creek ..		
" " ..	17 Mar., " 1911	15.10	(Mackay) ..	26 Feb., " 1904	16.34
" " ..	31 " " 1911	18.60	Port Douglas ..	10 Mar., 1904	16.10
" " ..	1 Apr., " 1911	24.30	" " ..	17 " 1911	31.53
" " ..	2 " " 1911	28.80	" " ..	1 Apr., " 1911	18.17
" " ..	31 Jan., 1913	16.34	Proserpine ..	23 Jan., 1918	17.00
Landsborough ..	2 Feb., 1893	15.15	Ravenswood ..	24 Mar., 1890	17.35
Low Island ..	10 Mar., 1904	15.07	Redcliffe ..	16 Feb., 1893	17.35
" " ..	1 Apr., 1911	15.30	Rosedale ..	16 Jan., 1913	18.90
Lyndon (via Brixton)	3 " 1917	17.00*	Sarina ..	23 " 1918	22.60
Mackay ..	21 Jan., 1918	24.70†	St. Lawrence ..	30 " 1896	15.00
" " ..	22 " " 1918	17.25‡	The Hollow (Mac-		
Sugar Experimental			kay) ..	23 Feb., 1888	15.12
Farm, Mackay ..	21 " " 1918	16.80	Thornborough ..	20 Apr., 1903	18.07
" " ..	22 " " 1918	17.20	Townsville ..	24 Jan., 1892	19.20
Macnade Mill ..	5 Feb., 1899	15.20	" " ..	28 Dec., 1903	15.00
" " ..	6 Jan., 1901	23.33	Victoria Mill ..	6 Jan., 1901	16.67
" " ..	4 Mar., 1915	22.00	Woodlands (Yepp'n)	31 " 1893	23.07
Mapleton ..	26 Dec., 1909	15.72	Wootha ..	10 Feb., 1915	15.93
Mirani ..	12 Jan., 1901	16.59	Yandina ..	1 " 1893	20.08
Miriam Vale (B'berg)	17 " 1913	15.80	" " ..	9 Jan., 1898	19.25
Mooloolah ..	13 Mar., 1892	21.53	" " ..	28 Dec., 1909	15.80
" " ..	2 Feb., 1893	19.11	Yarrabah ..	2 Apr., 1911	30.65
Mount Cuthbert ..	8 Jan., 1911	18.00	" " ..	24 Jan., 1916	27.20
Mount Molloy ..	31 Mar., " 1911	20.00	" " ..	25 " " 1916	18.60
" " ..	1 Apr., " 1911	20.00	Yeppoon ..	31 " 1893	20.05
" " ..	2 " " 1911	20.00	" " ..	8 " 1898	18.05
			" " ..	8 Oct., 1914	21.70

HEAVY RAINFALLS—WESTERN AUSTRALIA, UP TO 1924, INCLUSIVE.

Name of Town or Locality.	Date.	Amnt.	Name of Town or Locality.	Date.	Amnt.
		ins.			ins.
Alice Downs ..	15 Mar., 1922	10.58	Exmouth Gulf ..	2 Feb., 1918	12.50
Balla Balla ..	21 " 1899	14.40	Fortescue ..	3 May, 1890	23.36
Bamboo Creek ..	22 " " 1899	10.10	Frazier Downs ..	3 Mar., 1916	11.25
Boodarie ..	21 " " 1899	14.53	Gnaraloo ..	20 " 1923	11.00
" " ..	3 Jan., 1896	10.03	Kerdiadary ..	7 Feb., 1901	12.00
Booloogooroo ..	16 " 1923	10.76	Meda ..	2 Mar., 1916	10.55
Broome ..	6 Jan., 1917	14.00	Millstream ..	5 " 1900	10.00
Carlton ..	11 " 1903	10.64	Minilya ..	15 Jan., 1923	11.50
Cossack ..	3 Apr., 1898	12.82	Obagama ..	28 Feb., 1910	12.00
" " ..	16 " 1900	13.23	" " ..	24 Dec., 1920	13.02
Croydon ..	3 Mar., 1903	12.00	Pilbara ..	2 Apr., 1898	14.04
Derby ..	29 Dec., 1898	13.09	Point Cloates ..	20 Jan., 1909	10.87
" " ..	7 Jan., 1917	16.47			

* Mr. Jas. Laidlaw, of Lyndon, states that this fell in 4 hours. † 37½ hours. ‡ 22½ hours.

HEAVY RAINFALLS, WESTERN AUSTRALIA—*continued.*

Name of Town or Locality.	Date.	Amnt.	Name of Town or Locality.	Date.	Amnt.
		ins.			ins.
Point Torment ..	17 Dec., 1906	11.86	Whim Creek ..	21 Mar., 1899	18.17
Port George IV. ..	17 Jan., 1915	11.24	" " ..	6 " 1900	10.03
Roebourne ..	3 Apr., 1898	11.44	" " ..	3 " 1903	10.44
" ..	6 Mar., 1900	10.32	Winderrie ..	17 Jan., 1923	14.23
Roebuck Plains ..	5 Jan., 1917	14.01	Woodstock ..	21 " 1912	13.00
" " ..	6 " "	22.36	Wyndham ..	27 Jan., 1890	11.60
Springvale ..	14 Mar., 1922	12.25	" " ..	4 Mar., 1919	12.50
Tambray ..	6 " 1900	11.00	Yardie Creek ..	3 Feb., 1918	10.00
" ..	3 " 1903	10.47	Yeeda ..	2 Mar., 1916	10.70
Thangoc ..	17-19 Feb. '96	24.18	" ..	6 Jan., 1917	10.20
" ..	28 Dec., 1898	11.15	" ..	7 " "	11.75
Whim Creek ..	3 Apr., 1898	29.41			

HEAVY RAINFALLS—NORTHERN TERRITORY, UP TO 1924, INCLUSIVE.

Name of Town or Locality.	Date.	Amnt.	Name of Town or Locality.	Date.	Amnt.
		ins.			ins.
Bonbrook ..	24 Dec., 1915	10.60	Darwin ..	7 Dec., 1915	11.67
Borroloola ..	14 Mar., 1899	14.00	Groote Eylandt ..	30-31 Mar., '22	12.00a
Brock's Creek ..	4 Jan., 1914	10.68	Lake Nash ..	21 Mar., 1901	10.25
" " ..	24 Dec., 1915	14.33	Pine Creek ..	8 Jan., 1897	10.35
Burrundie ..	4 Jan., 1914	11.61			
Cosmopolitan Gold Mine ..	24 Dec., 1915	10.60			

(a) Approximate only, as gauge was washed away.

HEAVY RAINFALLS—SOUTH AUSTRALIA, UP TO 1924, INCLUSIVE.

Name of Town or Locality.	Date.	Amnt.	Name of Town or Locality.	Date.	Amnt.
		ins.			ins.
Wilmington ..	28 Feb., 1921	3.97	Wilmington ..	1 Mar., 1921	7.12

HEAVY RAINFALLS—VICTORIA, UP TO 1924, INCLUSIVE.

Name of Town or Locality.	Date.	Amnt.	Name of Town or Locality.	Date.	Amnt.
		ins.			ins.
Balook ..	26 Sept., 1917	5.32	Mt. Buffalo ..	6 June, 1917	8.53
" " ..	27 " "	7.23	" " ..	7 " "	6.56
" " ..	28 " "	2.08			

HEAVY RAINFALLS—TASMANIA, UP TO 1924, INCLUSIVE.

Name of Town or Locality.	Date.	Amnt.	Name of Town or Locality.	Date.	Amnt.
		ins.			ins.
Cullenswood ..	5 June, 1923	10.50	Mathinna ..	8-10 Mar., '11	15.79
Gould's Country ..	8-10 Mar., '11	15.33	The Springs ..	30-31 Jan., '16	10.75
Lottah ..	8-10 " "	18.10	Triabunna ..	5 June, 1923	10.20

10. **Snowfall.**—Light snow has been known to fall occasionally so far north as latitude 31° S., and from the western to the eastern shores of the continent. During exceptional seasons, it has fallen simultaneously over two-thirds of the State of New South Wales, and has extended at times along the whole of the Great Dividing Range, from its southern extremity in Victoria so far north as Toowoomba in Queensland. During the winter, for several months, snow covers the ground to a great extent on the Australian Alps, where also the temperature falls below zero Fahrenheit during the night. In the ravines around Kosciusko and similar localities the snow never entirely disappears.

The antarctic "V"-shaped disturbances are always associated with the most pronounced and extensive snowfalls. The barometric gradients are very steep where the "trough line" extends northward, and the apexes are unusually sharp-pointed, and protrude into very low latitudes, sometimes even to the tropics.

11. **Hail.**—Hail falls most frequently along the southern shores of the continent in the winter, and over south-eastern Australia during the summer months. The size of the hailstones generally increases with distance from the coast, a fact which lends strong support to the theory that hail is brought about by ascending currents. A summer rarely passes without some station experiencing a fall of stones exceeding in size an ordinary hen-egg, and many riddled sheets of light-gauge galvanized iron bear evidence of the weight and penetrating power of the stones.

The hailstorms occur most frequently when the barometric readings indicate a flat and unstable condition of pressure. They are almost invariably associated with tornadoes or tornadic tendencies, and on the east coast the clouds from which the stones fall are generally of a remarkable sepia-coloured tint.

12. **Barometric Pressures.**—The mean annual barometric pressure (corrected to sea-level and standard gravity) in Australia varies from 29.80 inches on the north coast to 29.92 inches over the central and 30.03 inches in the southern parts of the continent. In January, the mean pressure ranges from 29.70 inches in the northern and central areas to 29.95 inches in the southern. The July mean pressure ranges from 29.90 inches at Darwin to 30.12 inches at Alice Springs. Barometer readings corrected to mean sea level and standard gravity have, under anticyclonic conditions in the interior of the continent, ranged as high as 30.77 inches (at Kalgoorlie on the 28th July, 1901) and have fallen as low as 27.55 inches. This lowest record was registered at Mackay during a tropical hurricane on the 21st January, 1918. An almost equally abnormal reading of 27.88 inches was recorded at Innisfail during a similar storm on the 10th March, 1918. The mean annual fluctuations of barometric pressure for the capitals of Australia are shown on the graph herein.

13. **Wind.**—Notes on the distinctive wind currents in Australia were given in preceding Year Books (see No. 6, page 83), but, owing to limitations of space, have not been included herein.

14. **Cyclones and Storms.**—The "elements" in Australia are ordinarily peaceful, and while destructive cyclones have visited various parts, more especially coastal areas, such visitations are rare, and may be properly described as erratic.

During the winter months, the southern shores of the continent are subject to cyclonic storms, evolved from the V-shaped depressions of the southern low-pressure belt. They are felt most severely over the south-western parts of Western Australia, to the south-east of South Australia, in Bass Straits, including the coast line of Victoria, and on the west coast of Tasmania. Apparently the more violent wind pressures from these cyclones are experienced in their northern half, or in that part of them which has a north-westerly to a south-westerly circulation.

The north-east coast of Queensland is occasionally visited by hurricanes from the north-east tropics. During the first four months of the year, these hurricanes appear to have their origin in the neighbourhood of the South Pacific Islands, their path being a parabolic curve first to the S.W. and finally towards the S.E. Only a small percentage, however, reach Australia, the majority recurving in their path to the east of New Caledonia.

Very severe cyclones, locally known as "willy willies," are peculiar to the north-west coast of Western Australia from the months of November to April inclusive. They apparently originate in the ocean in the vicinity of Cambridge Gulf, and travel in a south-westerly direction with continually increasing force, displaying their greatest energy near Cossack and Onslow, between latitudes 20° and 22° South. The winds in these

storms, like those from the north-east tropics, are very violent and destructive, and cause great havoc amongst the pearl-fishers. The greatest velocities are usually to be found in the south-eastern quadrant of the cyclones, with north-east to east winds. After leaving the north-west coast, these storms either travel southwards, following the coastline, or cross the continent to the Great Australian Bight. When they take the latter course, their track is marked by torrential rains, as much as 29.41 inches, for example, being recorded in 24 hours at Whim Creek from one such occurrence. Falls of 10 inches and over have frequently been recorded in the northern interior of Western Australia from similar storms.

Some further notes on severe cyclones and on "southerly bursters," a characteristic feature of the eastern part of Australia, will be found in previous issues of the Official Year Book (see No. 6, pp. 84, 85, 86).

A special article dealing with "Australian Hurricanes and Related Storms" appeared in Official Year Book No. 16, pp. 80-84.

15. Influences affecting Australian Climate.—(i) *General.* Australian history does not cover a sufficient period, nor is the country sufficiently occupied, to ascertain whether or not the advance of settlement has materially affected the climate as a whole. Local changes have, however, taken place, a fact which suggests that settlement and the treatment of the land have a distinct effect on local conditions. For example, the mean temperature of Sydney shows a rise of two-tenths of a degree during the last twenty years, a change probably brought about by the great increase of residential and manufacturing buildings within the city and in the surrounding suburbs. Again, low-lying lands on the north coast of New South Wales, which originally were seldom subject to frosts, have, with the denudation of the surrounding hills from forests, experienced annual visitations, the probable explanation being that through the absence of trees the cold air of the high lands now flows unchecked and untempered down the sides of the hills to the valleys and lower lands.

(ii) *Influence of Forests on Climate.* As already indicated, forests doubtless exercise a great influence on local climate, and hence, to the extent that forestal undertakings will allow, the weather can be controlled by human agency. The direct action of forests is an equalizing one; thus, especially in equatorial regions, and during the warmest portion of the year, they considerably reduce the mean temperature of the air. They also reduce the diurnal extremes of shade temperatures by altering the extent of radiating surface, by evaporation and by checking the movement of air, and while decreasing evaporation from the ground, they increase the relative humidity. Vegetation greatly diminishes the rate of flow-off of rain and the washing away of surface soil, and when a region is protected by trees, a steadier water supply is ensured, and the rainfall is better conserved. In regions of snowfall, the supply of water to rivers is similarly regulated, and without this and the sheltering influence of ravines and "gullies," watercourses supplied mainly by melting snow would be subject to alternate periods of flooding and dryness. This is borne out in the case of the inland rivers; the River Murray, for example, which has never been known to become dry, deriving its steadiness of flow mainly through the causes indicated.

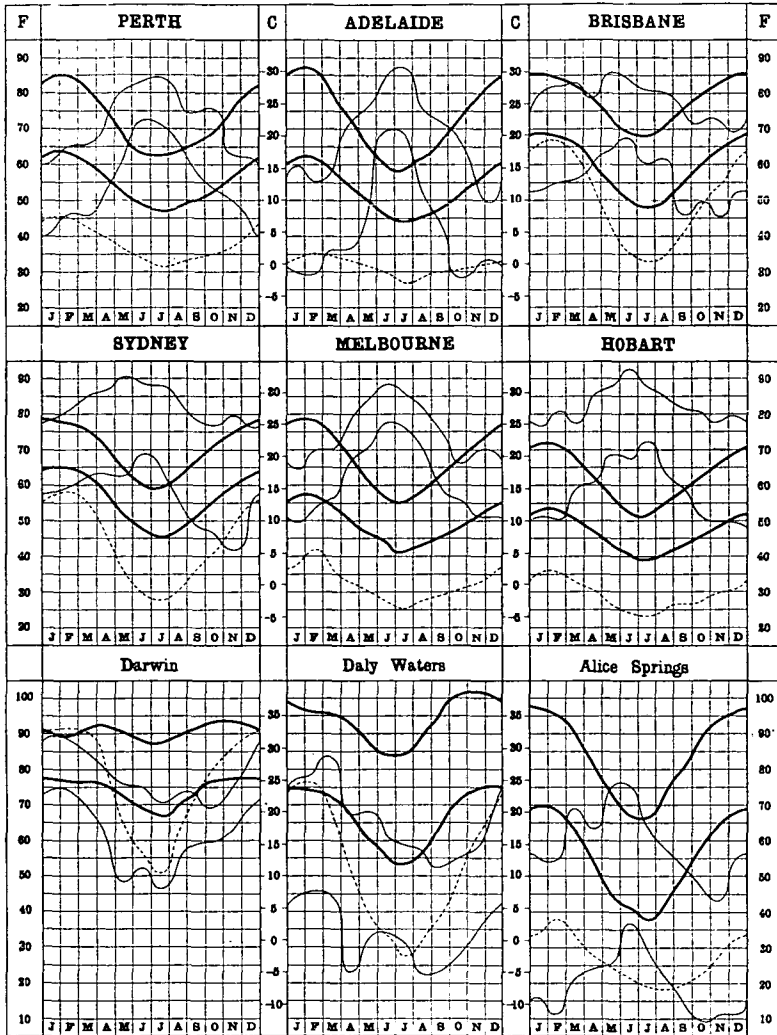
(iii) *Direct Influence of Forests on Rainfall.* Whether forests have a direct influence on rainfall is a debatable question, some authorities alleging that precipitation is undoubtedly induced by forests, while others take the opposite view.

Sufficient evidence exists, however, to prove that, even if the rainfall has not increased, the beneficial climatic effect of forest lands more than warrants their protection and extension. Rapid rate of evaporation, induced by both hot and cold winds, injures crops and makes life uncomfortable on the plains, and, while it may be doubted that the forest aids in increasing precipitation, it must be admitted that it does check winds and the rapid evaporation due to them. Trees as wind-breaks have been successfully planted in central parts of the United States, and there is no reason why similar experiments should not be successful in many parts of the treeless interior of Australia. The belts should be planted at right angles to the direction of the prevailing parching winds, and if not more than half a mile apart will afford shelter to the enclosed areas.

In previous issues some notes on observations made in other countries were added (see Official Year Book No. 6, pp. 86 and 95).

16. Rainfall and Temperature, Various Cities.—The following table shows rainfall and temperature for various important cities throughout the world, for the site of the Federal capital, and for the capitals of the Australian States.

ANNUAL FLUCTUATIONS OF NORMAL MAXIMUM AND MINIMUM TEMPERATURE AND HUMIDITY.



EXPLANATION.—The upper and lower heavy lines in each graph represent the maximum and minimum temperatures respectively. The Fahrenheit temperature scales are shown on the outer edge of the sheet under "F," and the centigrade scales in the two inner columns under "C."

The broken line shows the normal absolute humidity in the form of 9 a.m. vapour pressures for which the figures in the outer "F" columns represent hundredths of an inch of barometric pressure.

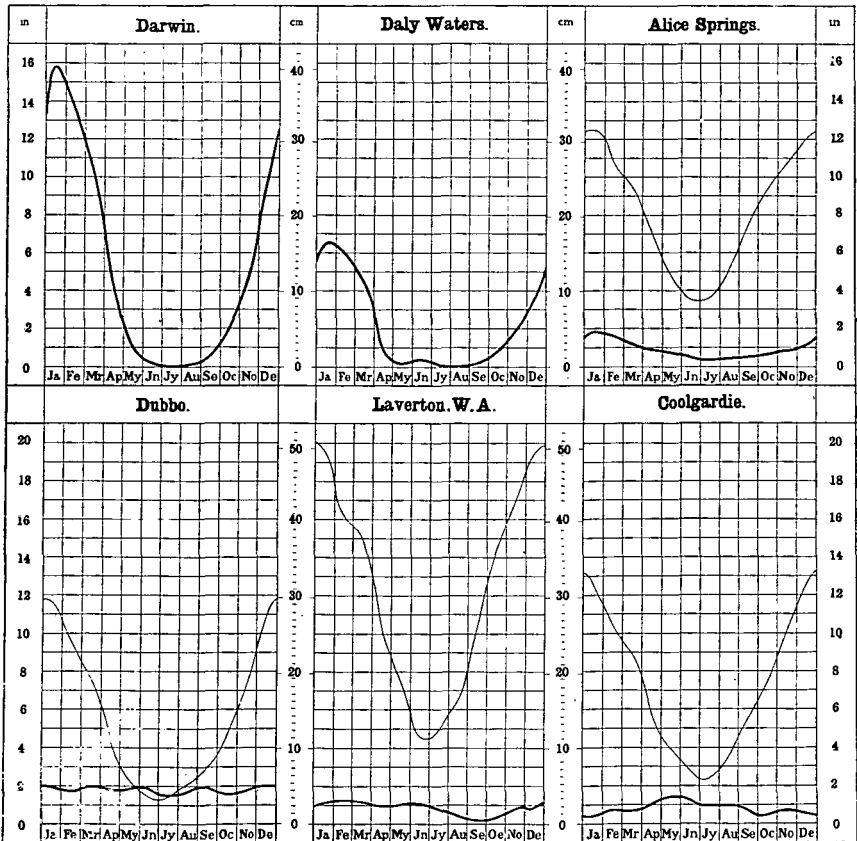
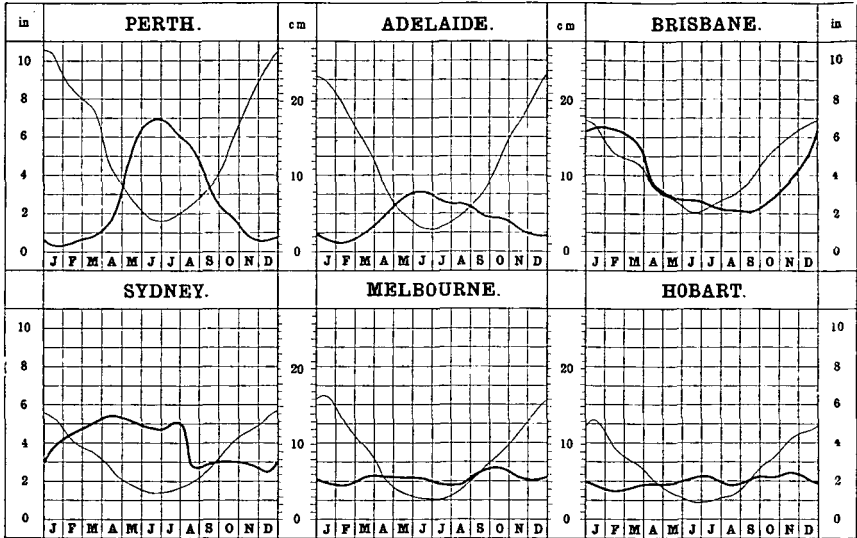
The upper and lower fine lines join the greatest and the least monthly means of relative humidity respectively, the figures under the outer columns "F" indicating percentage values.

The curves for temperature and vapour pressure joining the mean monthly values serve to show the annual fluctuation of these elements, but the relative humidity graphs joining the extreme values for each month do not indicate any normal annual variation.

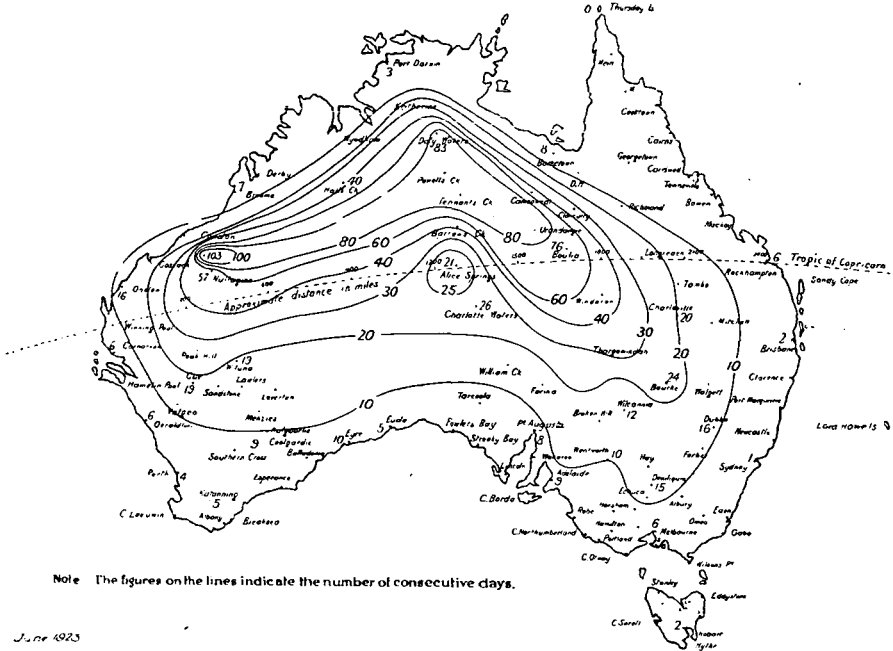
Comparison of the maximum and minimum temperature curves affords a measure of the mean diurnal range of temperature. At Perth in the middle of January, for instance, there is normally a range of 21° from 63° F. to 84° F., but in June it is only 15° from 48° F. to 63° F.

The relative humidity curves illustrate the extreme range of the mean monthly humidity over a number of years.

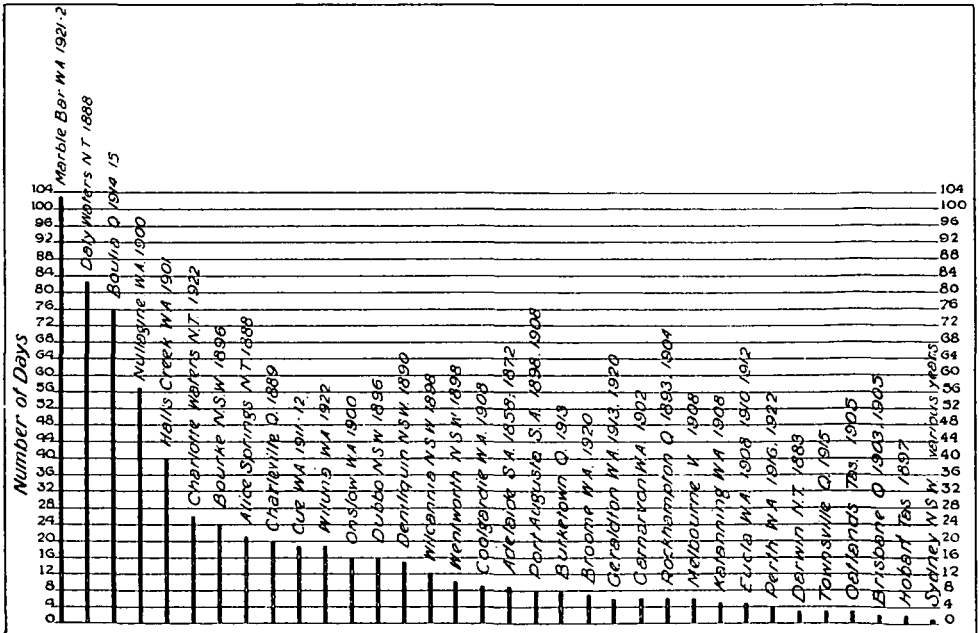
MEAN MONTHLY RAINFALL AND EVAPORATION.



Area affected and period of duration of the Longest Heat Waves when the Maximum Temperature for consecutive 24 hours reached or exceeded 100° Fah.



Greatest number of consecutive days on which the Shade Temperature was over 100° Fah. at the places indicated.



EXPLANATION.—On the preceding graphs thick lines denote rainfall, and thin lines evaporation, and show the fluctuation of the mean rate of fall *per month* throughout the year. The results, plotted from the Climatological Tables herein are shown in inches (see the outer columns), and the corresponding metric scale (centimetres) is shown in the two inner columns. The evaporation is not given for Darwin and Daly Waters.

At Perth, Adelaide, Brisbane, Melbourne, Hobart, Alice Springs, and Coolgardie the results have been obtained from jacketed tanks sunk in the ground. At Sydney and Dubbo sunken tanks without water jackets are used, whilst at Laverton (W.A.) the records are taken from a small portable jacketed evaporation dish of 8 inches in diameter.

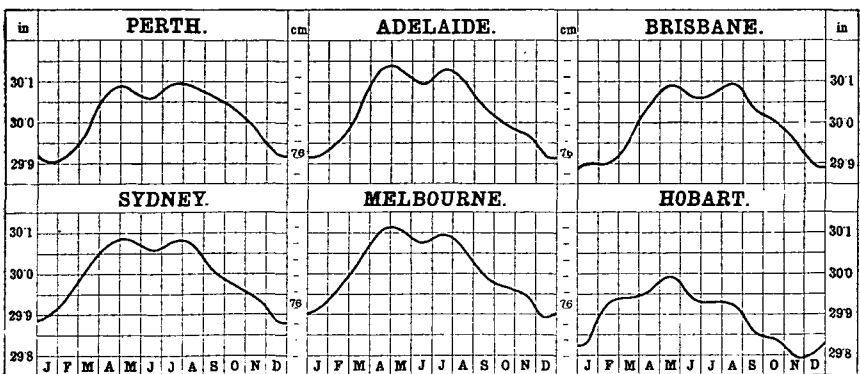
The distance for any date from the zero line to the curve represents the average number of inches, reckoned as per month, of rainfall at that date. Thus, taking the curves for Adelaide, in the middle of January the rain falls on the average at the rate of about three-fourths of an inch per month, or, say, at the rate of about 9 inches per year. In the middle of June it falls at the rate of a little over 3 inches per month, or, say, at the rate of about 37 inches per year. At Dubbo the evaporation is at the rate of nearly 11½ inches per month about the middle of January, and only about 1½ inches at the middle of June.

The mean annual rainfall and evaporation at the places indicated are given in the appended table.

MEAN ANNUAL RAINFALL AND EVAPORATION.

Place.	Rainfall.	Evapora- tion.	Place.	Rainfall.	Evapora- tion.
	In.	In.		In.	In.
Perth ..	34.10	65.80	Darwin ..	62.07	—
Adelaide ..	21.18	54.55	Daly Waters ..	26.58	—
Brisbane ..	45.20	53.37	Alice Springs ..	11.24	93.99
Sydney ..	47.74	38.43	Dubbo ..	21.82	66.37
Melbourne ..	25.61	38.60	Laverton, W.A.	9.76	141.45
Hobart ..	23.77	32.10	Coolgardie ..	10.07	87.69

MEAN BAROMETRIC PRESSURE—CAPITAL CITIES.



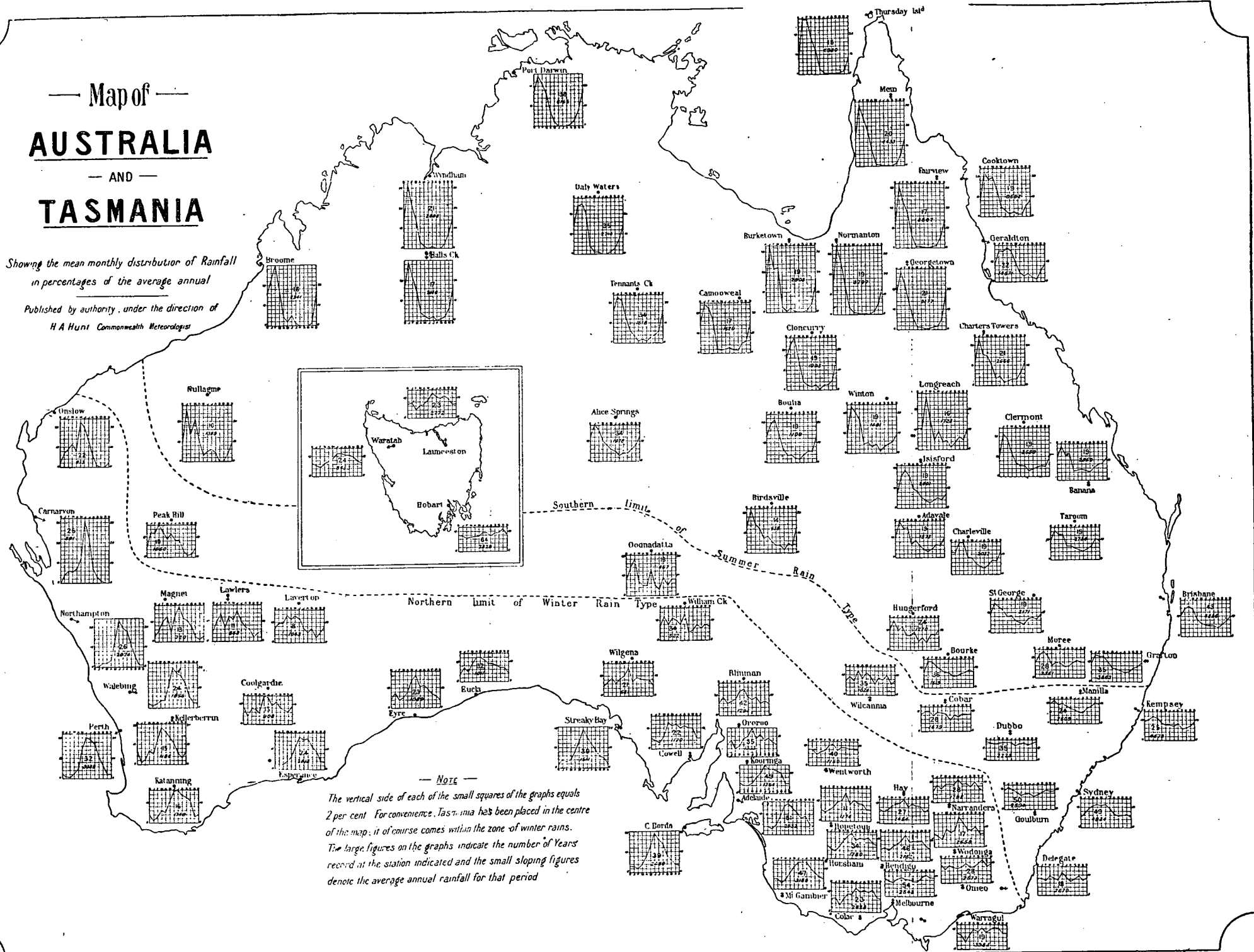
EXPLANATION.—The lines representing the yearly fluctuations of barometric pressure at the State capital cities are means for long periods, and are plotted from the Climatological Tables herein. The pressures are shown in inches on about 2½ times the natural scale, and the corresponding pressures in centimetres are also shown in the two inner columns, in which each division represents one millimetre.

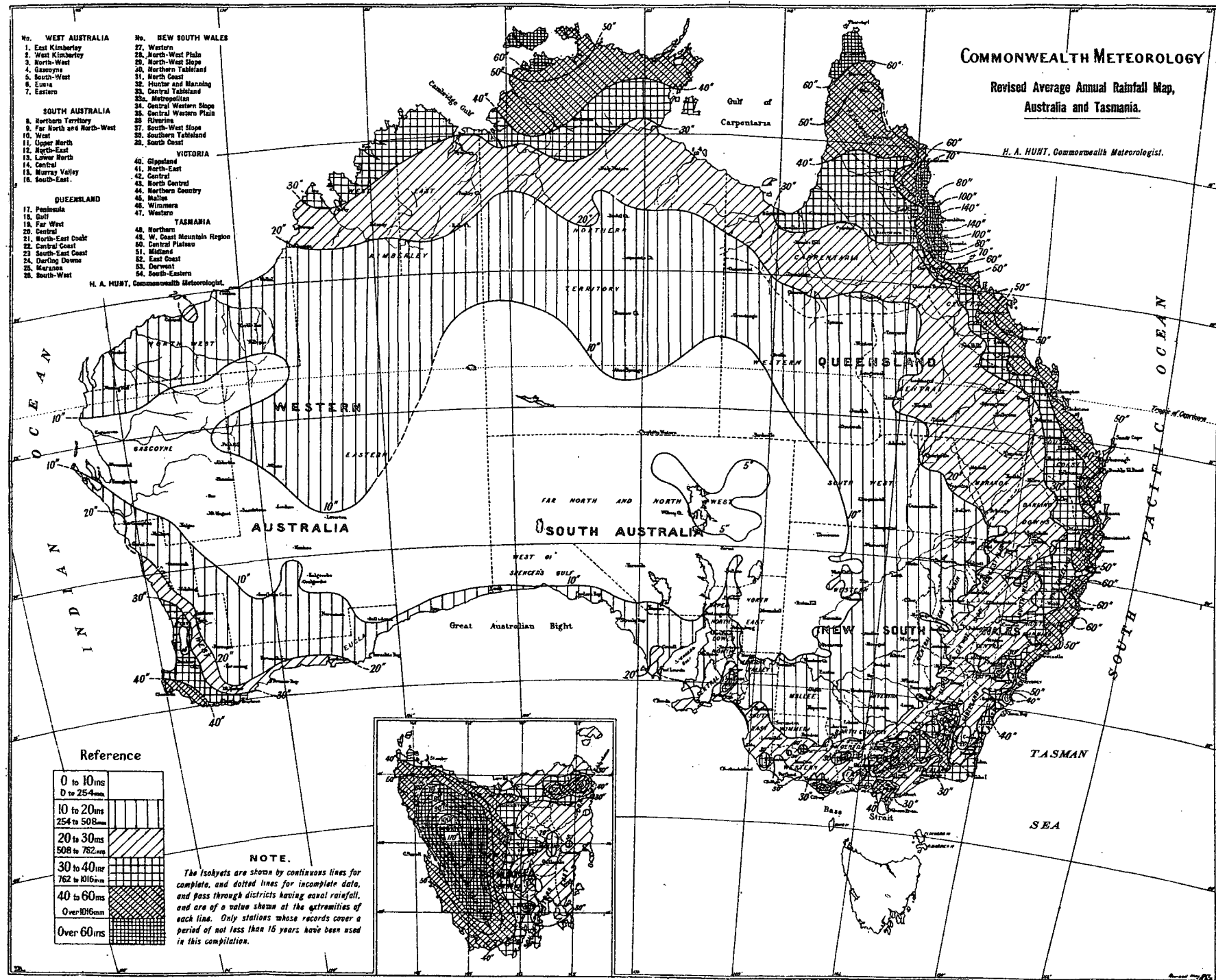
INTERPRETATION.—Taking the Brisbane graph for purposes of illustration, it will be seen that the mean pressure in the middle of January is about 29.87 inches, and there are maxima in the middle of May and August of about 30.09 inches.

Map of AUSTRALIA — AND — TASMANIA

Showing the mean monthly distribution of Rainfall
in percentages of the average annual

Published by authority, under the direction of
H. A. Hunt, Commonwealth Meteorologist





RAINFALL AND TEMPERATURE—VARIOUS CITIES.

Place.	Height above M.S.L.	Annual Rainfall.			Temperature.							
		Average.	Highest.	Lowest.	(a) Mean Summer.	(b) Mean Winter.	Highest on Record.	Lowest on Record.	Average Hottest Month.	Average Coldest Month.	Fahr.	Fahr.
		Ins.	Ins.	Ins.	Fahr.	Fahr.	Fahr.	Fahr.	Fahr.	Fahr.		
Amsterdam ..	6	27.29	40.59	17.60	63.2	36.8	90.0	4.1	64.4	35.4		
Auckland ..	125	43.88	74.15	26.32	66.2	52.5	91.0	31.9	67.1	51.8		
Athens ..	351	15.48	33.33	4.56	79.2	49.1	109.4	10.6	81.0	47.4		
Bergen ..	72	77.99	111.53	44.49	56.8	34.2	88.5	4.8	57.9	33.6		
Berlin ..	161	22.72	30.04	14.25	64.8	33.0	98.6	-13.0	66.0	31.8		
Berne ..	1,877	36.30	58.23	24.69	62.2	30.1	91.4	-3.6	64.4	28.0		
Bombay ..	37	71.15	114.89	33.41	33.5	75.1	100.0	-55.9	84.8	74.2		
Breslau ..	482	22.52	32.56	16.50	64.1	33.5	100.0	-23.4	65.5	29.3		
Brussels ..	328	28.35	41.18	17.73	62.6	36.0	95.5	-4.4	63.7	34.5		
Budapest ..	500	25.20	35.28	16.79	68.6	30.2	98.6	-5.1	70.4	28.2		
Buenos Ayres ..	82	38.78	79.72	20.04	72.7	50.9	103.1	22.3	73.8	50.0		
Calcutta ..	21	61.82	98.48	38.43	85.6	68.0	108.2	44.2	86.0	66.4		
Capetown ..	40	25.50	36.72	17.71	68.1	54.7	102.0	34.0	68.8	53.9		
Caracas ..	3,420	30.03	47.36	23.70	68.3	65.3	87.8	48.2	69.2	63.7		
Chicago ..	823	33.28	45.86	24.52	70.0	26.1	103.0	-23.0	72.4	23.7		
Christchurch ..	25	25.16	35.30	13.54	61.3	43.3	95.7	21.3	61.6	42.4		
Christiania (Oslo) ..	75	23.23	32.21	16.26	61.0	24.5	95.0	-21.1	62.6	23.9		
Colombo ..	40	83.83	139.70	51.60	81.5	79.9	95.8	65.0	82.6	79.1		
Constantinople ..	245	28.75	42.74	14.78	74.0	43.5	103.6	13.0	75.7	42.0		
Copenhagen ..	10	20.79	25.83	15.47	60.4	33.3	85.5	-3.3	61.9	32.4		
Dresden ..	115	26.80	34.49	17.72	62.9	32.4	93.4	-15.3	64.4	31.6		
Dublin ..	47	27.66	35.56	16.60	59.4	42.0	87.2	13.3	60.5	41.7		
Dunedin ..	300	36.96	54.51	22.15	56.3	42.6	94.0	23.0	57.0	41.6		
Durban ..	260	40.79	71.27	27.24	75.6	64.4	110.6	41.1	76.7	63.8		
Edinburgh ..	441	25.21	32.05	16.44	55.8	38.8	87.7	5.0	57.2	38.3		
Geneva ..	1,328	33.48	46.89	21.14	64.4	33.7	95.5	..	66.2	32.2		
Genoa ..	157	51.29	108.22	28.21	73.8	46.8	94.5	16.7	75.4	45.5		
Glasgow ..	184	38.49	56.18	29.05	52.7	41.0	84.9	6.6	58.0	38.4		
Greenwich ..	149	23.50	35.54	16.38	62.0	39.5	100.0	6.9	63.5	38.5		
Hong Kong ..	109	84.28	119.72	45.84	86.2	64.8	97.0	32.0	86.7	62.9		
Johannesburg ..	5,750	31.63	50.00	21.66	65.4	54.4	94.0	23.3	68.2	48.9		
Leipzig ..	384	24.69	31.37	17.10	63.1	31.5	97.3	-14.8	64.8	30.6		
Lisbon ..	312	29.18	52.79	17.32	69.6	51.3	94.1	32.5	70.2	49.3		
London (Kew) ..	18	23.80	38.20	16.64	61.2	39.8	94.0	9.4	62.7	38.9		
Madras ..	22	49.85	88.41	18.45	89.0	76.8	113.0	57.5	89.9	76.1		
Madrid ..	2,149	16.23	27.48	9.13	73.0	41.2	107.1	10.5	75.7	39.7		
Marseilles ..	246	22.24	43.03	12.28	70.5	45.3	100.4	11.7	72.3	44.6		
Moscow ..	526	18.94	29.28	12.07	63.4	14.7	99.5	-44.5	66.1	11.9		
Naples ..	489	34.00	56.58	21.75	73.6	48.0	99.1	23.9	75.4	46.8		
New York ..	314	44.63	58.68	33.17	71.4	31.8	102.0	-13.0	73.5	30.2		
Ottawa ..	236	33.40	53.79	25.63	67.2	14.1	98.0	-33.0	69.7	12.0		
Paris ..	164	22.64	29.57	16.46	63.5	37.2	101.1	-14.1	64.9	36.1		
Pekin ..	143	24.40	36.00	18.00	77.7	26.6	114.0	-5.0	79.2	23.6		
Petrograd ..	16	21.30	29.52	13.75	61.1	17.4	97.0	-38.2	63.7	15.2		
Quebec ..	296	40.50	53.79	32.12	63.5	12.4	96.0	-34.0	66.3	10.1		
Rome ..	168	32.57	57.89	12.72	74.3	46.0	104.2	17.2	76.1	44.6		
San Francisco ..	155	22.27	38.82	9.00	58.8	50.5	101.0	29.0	59.3	49.5		
Shanghai ..	21	45.00	62.52	27.92	78.0	41.1	102.9	10.2	80.4	37.8		
Singapore ..	8	91.99	158.68	32.71	81.2	78.6	94.2	63.4	81.5	78.3		
Stockholm ..	144	19.09	28.27	11.81	59.5	27.3	96.8	-25.6	61.9	26.4		
Tokio ..	65	61.45	86.37	45.72	74.8	39.2	97.9	17.2	77.7	37.5		
Trieste ..	85	42.94	63.14	26.57	73.9	41.3	99.5	14.0	78.3	39.0		
Vienna ..	663	24.50	33.90	16.50	65.7	30.4	97.7	-8.0	67.1	28.0		
Vladivostok ..	55	19.54	33.60	9.39	63.0	11.0	95.7	-21.8	69.4	6.1		
Washington ..	112	43.50	61.33	30.85	74.7	34.5	106.0	-15.0	76.8	32.9		
Wellington (N.Z.) ..	10	48.65	67.68	27.83	61.8	48.6	88.0	28.6	62.5	47.7		
Zürich ..	1,542	45.15	78.27	29.02	63.3	31.3	94.1	-0.8	65.1	29.5		

FEDERAL CAPITAL SITE.

Canberra (Dist.)	{ 2,000 to (2,900)	22.50	41.29	10.45	(a) 68.0	(b) 44.0	102.6	14.0	68.6	42.7
Queanbeyan										

STATE CAPITALS.

					(a)	(b)				
Perth ..	197	34.08	46.73	20.21	73.0	56.0	108.4	34.2	74.2	55.2
Adelaide ..	140	21.21	30.87	11.39	72.6	53.1	118.3	32.0	74.1	51.7
Brisbane ..	137	45.14	82.26	16.17	76.7	59.7	108.9	36.1	77.2	58.5
Sydney ..	138	47.58	82.76	21.49	71.0	54.1	108.5	35.9	71.7	52.6
Melbourne ..	115	25.73	44.25	15.61	66.6	50.0	111.2	27.0	67.5	48.6
Hobart ..	177	23.83	43.39	13.43	61.6	46.8	105.2	27.0	62.3	45.6

(a) Mean of the three hottest months.

(b) Mean of the three coldest months.

17. Climatological Tables.—The means, averages, extremes, totals, etc., for a number of climatological elements have been determined from long series of observations at the Australian capitals up to and including the year 1924. These are given in the following tables:—

CLIMATOLOGICAL DATA—PERTH, WESTERN AUSTRALIA.

LAT. 31° 57' S., LONG. 115° 50' E. HEIGHT ABOVE M.S.L. 197 Ft.

BAROMETER, WIND, EVAPORATION, LIGHTNING, CLOUDS, AND CLEAR DAYS.

Month.	Bar. corrected to 32° F. Mm. Sea Level and Standard Gravity from 9 a.m. and 3 p.m. readings.	Wind.				Mean Amount of Evaporation (inches).	No. of Days Lightning.	Mean Amount of Clouds, 9 a.m. 3 p.m. & 9 p.m.	No. of Clear Days.
		Greatest Number of Miles in one day.	Mean Hourly Pressure. (lbs.)	Total Miles.	Prevailing Direction.				
No. of yrs. over which observation extends	40	27	27	27	27	26	27	28	28
January ..	29.906	797 27/98	0.67	11,192	S S E	10.35	1.7	2.9	13.9
February ..	29.924	650 6/08	0.63	9,786	S S E	8.59	1.5	2.9	11.6
March ..	29.987	651 6/13	0.53	9,950	S S E	7.65	1.4	3.2	12.0
April ..	30.075	955 25/00	0.39	8,343	S E	4.75	1.3	4.2	7.9
May ..	30.073	768 5/12	0.34	8,073	E N E	2.72	2.3	5.3	5.1
June ..	30.058	861 27/10	0.35	7,966	N	1.75	2.2	5.9	3.2
July ..	30.092	949 11/99	0.38	8,485	N	1.75	2.4	5.4	5.0
August ..	30.086	966 15/03	0.40	8,803	W	2.35	1.6	5.4	5.0
September ..	30.060	864 11/05	0.42	8,618	S W	3.30	1.3	4.9	5.7
October ..	30.030	809 6/16	0.52	9,876	S S W	5.22	1.0	4.9	5.9
November ..	29.988	777 18/97	0.53	10,099	S	7.60	1.3	3.8	8.1
December ..	29.927	776 6/22	0.63	10,955	S	9.77	1.8	2.9	12.3
Year { Totals ..	—	—	—	—	—	65.80	19.8	—	95.7
Averages ..	30.017	—	0.48	9,346	S	—	—	4.3	—
Extremes ..	—	966 15/8/03	—	—	—	—	—	—	—

TEMPERATURE AND SUNSHINE.

Month.	Mean Temperature (Fahr.).			Extreme Shade Temperature (Fahr.).		Extreme Range.	Extreme Temperature (Fahr.).		Mean Hours of Sunshine.
	Mean.	Max.	Min.	Highest.	Lowest.		Highest in Sun.	Lowest on Grass.	
No. of yrs. over which observation extends	28	28	28	28	28	28	26	26	27
January ..	84.3	63.1	73.7	108.4 28/21	49.9 1/21	58.5	177.3 22/14	40.4 1/21	318.4
February ..	85.0	63.5	74.2	107.4 4/23	47.7 1/02	59.7	169.0 4/99	39.8 1/13	270.8
March ..	81.5	60.9	71.2	106.4 14/22	45.8 8/03	60.6	167.0 19/18	36.7 8/03	269.5
April ..	76.2	57.2	66.7	99.7 9/10	39.3 20/14	60.4	157.0 8/16	31.0 20/14	218.7
May ..	68.7	52.5	60.6	90.4 2/07	34.3 11/14	56.1	144.2 8/24	25.3 11/14	176.5
June ..	63.9	49.5	56.7	81.7 2/14	35.0 30/20	46.7	135.5 9/14	26.5 30/20	144.2
July ..	62.7	47.8	55.2	76.4 21/21	34.2 7/16	42.2	133.2 13/15	25.1 30/20	166.7
August ..	63.8	48.1	56.0	81.0 12/14	35.3 31/08	45.7	145.1 29/21	27.9 10/11	184.9
September ..	66.0	50.1	58.0	90.9 30/18	38.9 17/13	52.0	153.6 29/16	29.2 21/16	203.2
October ..	69.1	52.6	60.8	95.3 30/22	40.5 5/24	54.8	154.0 29/14	30.5 4/17	235.9
November ..	75.5	56.5	66.6	104.6 24/13	42.0 1/04	62.6	166.6 23/15	35.5 (a)	285.7
December ..	80.7	60.4	70.6	107.9 20/04	48.0 2/10	59.9	168.7 25/15	39.0 12/20	324.4
Year { Averages ..	73.1	55.2	64.1	—	—	—	—	—	2798.9b
Extremes ..	—	—	—	108.4 28/1/21	34.2 7/7/16	74.2	177.3 22/1/14	25.1 30/7/20	—

(a) 6/10 and 14/12.

(b) Total for year.

HUMIDITY, RAINFALL, AND DEW.

Month.	Vapour Pressure (inches).	Rel. Hum. (%)				Rainfall (inches).				Dew. Mean No. Days Dew.
	Mean 9 a.m.	Mean 9 a.m.	Highest Mean.	Lowest Mean.	Mean Monthly.	Mean No. of Days Rain.	Greatest Monthly.	Least Monthly.	Greatest in One Day.	
No. of yrs. over which observation extends	23	28	28	28	49	49	49	49	49	28
January ..	.440	52	61	42	0.34	3	2.17 1879	nil (a)	1.74 28/79	2.6
February ..	.443	54	65	46	0.45	2	2.98 1915	nil (a)	1.63 26/15	3.2
March ..	.423	56	66	46	0.76	4	4.50 1896	nil (a)	2.06 26/23	5.6
April ..	.398	63	72	53	1.59	7	4.97 1882	nil 1920	2.62 30/04	9.1
May ..	.368	73	81	61	4.94	14	12.13 1879	0.98 1903	2.80 20/79	12.4
June ..	.339	78	83	68	6.89	17	12.80 1922	2.16 1877	3.00 10/20	12.8
July ..	.318	77	84	69	6.44	17	11.29 1917	2.42 1876	3.00 4/91	13.3
August ..	.325	74	79	67	5.70	18	10.33 1882	0.46 1902	2.79 7/03	11.3
September ..	.300	68	75	58	3.40	15	7.84 1922	0.34 1916	1.73 23/09	9.3
October ..	.350	68	75	54	2.18	12	7.87 1890	0.46 1892	1.88 15/10	5.3
November ..	.380	55	63	46	0.80	6	2.78 1916	nil 1891	1.11 30/03	3.8
December ..	.417	52	62	44	0.59	4	3.05 1888	nil 1886	1.72 1/88	3.0
Year { Totals ..	—	—	—	—	34.08	119	—	—	—	91.1
Averages ..	.375	62	—	—	—	—	12.80 6/22	nil (b)	3.90 10/6/20	—
Extremes ..	—	—	84	42	—	—	—	—	—	—

(a) Various years.

(b) January, February, March, November, and December, various years.

CLIMATOLOGICAL DATA—ADELAIDE. SOUTH AUSTRALIA.

LAT. 34° 56' S., LONG. 138° 35' E. HEIGHT ABOVE M.S.L. 140 FT.
BAROMETER, WIND, EVAPORATION, LIGHTNING, CLOUDS, AND CLEAR DAYS.

Month.	Bar. corrected to 32° F. Mm. Sea Level and Standard Gravity from 9 a.m. and 3 p.m. readings.	Wind.				Mean Amount of Evaporation (inches).	No. of Days Lightning.	Mean Amount of Clouds, 9 a.m. 3 p.m. & 9 p.m.	No. of Clear Days.
		Greatest Number of Miles in one day.	Mean Hourly Pressure. (lbs.)	Total Miles.	Prevailing Direction.				
No. of yrs. over which observation extends	68	47	47	47	47	55	53	57	43
January ..	29.915	758 19/99	0.34	7,907	S	8.96	2.3	3.5	8.2
February ..	29.952	691 22/96	0.29	6,713	S	7.34	2.0	3.4	7.2
March ..	30.038	628 9/12	0.24	6,660	S	5.80	2.1	3.9	7.0
April ..	30.122	773 10/96	0.21	6,079	S x W	3.43	1.5	5.0	4.1
May ..	30.122	760 9/80	0.21	6,253	N x E	2.02	1.7	5.8	1.9
June ..	30.033	750 12/78	0.25	6,589	N	1.23	2.1	6.2	1.6
July ..	30.129	674 25/82	0.24	6,721	N	1.23	1.6	5.8	1.8
August ..	30.099	773 31/97	0.28	7,146	N N W	1.87	2.1	5.6	2.6
September ..	30.037	720 2/87	0.31	7,296	W	2.84	2.5	5.2	3.1
October ..	29.997	763 28/98	0.34	7,869	S W x W	4.75	3.4	4.9	3.9
November ..	29.974	677 2/04	0.33	7,549	S S W	6.54	3.6	4.6	5.2
December ..	29.918	675 12/91	0.34	7,892	S S W	8.39	2.7	3.8	7.4
Year { Totals ..	—	—	—	—	—	54.45	27.6	—	54.0
Averages ..	30.033	—	0.28	7,057	S W x S	—	—	4.8	—
Extremes ..	—	773 (a)	—	—	—	—	—	—	—

(a) 10/4/96 and 31/8/97.

TEMPERATURE AND SUNSHINE.

Month.	Mean Temperature (Fahr.).			Extreme Shade Temperature (Fahr.).		Extreme Range.	Extreme Temperature (Fahr.).		Mean Hours of Sunshine.
	Mean Max.	Mean Min.	Mean.	Highest.	Lowest.		Highest in Sun.	Lowest on Grass.	
No. of yrs. over which observation extends	68	68	68	68	68	68	47	64	43
January ..	86.3	61.6	73.9	116.3 26/58	45.1 21/84	71.2	180.0 18/82	36.5 14/79	309.5
February ..	86.2	62.1	74.1	113.6 12/99	45.5 23/18	68.1	170.5 10/00	36.7 (c)	263.3
March ..	80.7	58.8	69.8	108.0 12/61	44.8 -/57	63.2	174.0 17/83	33.8 27/80	239.7
April ..	73.3	54.6	63.9	98.0 10/66	39.6 15/59	58.4	155.0 1/83	30.2 16/17	178.0
May ..	65.6	50.3	57.9	89.5 4/21	36.9 (a)	52.6	148.2 12/79	25.9 10/91	148.1
June ..	60.3	46.7	53.5	76.0 23/65	32.5 27/76	43.5	138.8 18/79	22.9 12/13	121.0
July ..	58.9	44.6	51.7	74.0 11/06	32.0 24/08	42.0	134.5 26/90	23.3 25/11	137.6
August ..	62.0	45.9	54.0	85.0 31/11	32.3 17/59	52.7	140.0 31/92	23.5 7/88	168.7
September ..	66.2	47.9	57.1	90.7 23/82	32.7 4/58	58.0	160.5 23/82	26.2 15/08	183.1
October ..	72.4	51.4	61.9	102.9 21/22	36.0 -/57	66.9	162.0 30/21	27.8 2/18	227.2
November ..	78.6	55.3	67.0	113.5 21/65	40.8 2/09	72.7	166.9 20/78	31.5 2/09	262.4
December ..	83.3	58.9	71.1	114.2 14/76	43.0 (b)	71.2	175.7 7/99	32.5 4/84	302.4
Year { Averages ..	72.8	53.2	63.0	—	—	—	—	—	2536.5d
Extremes ..	—	—	—	116.3 26/1/58	32.0 24/7/08	84.3	180.0 18/1/82	22.9 12/6/13	—

(a) 26/1895 and 24/1904.

(b) 16/1861 and 4/1906.

(c) 24/78 and 23/18.

(d) Total for year.

HUMIDITY, RAINFALL, AND DEW.

Month.	Vapour Pressure (inches)	Rel. Hum. (%)				Rainfall (inches).				Dew. Mean No. Days Dew.
		Mean 9 a.m.	Highest Mean.	Lowest Mean.	Mean Monthly.	Mean No. of Days Rain.	Greatest Monthly.	Least Monthly.	Greatest in One Day.	
No. of yrs. over which observation extends	57	57	57	57	86	86	86	86	86	53
January ..	.342	38	59	30	0.73	4	4.00 1850	nil (a)	2.30 2/89	4.2
February ..	.359	41	56	30	0.66	4	2.89 1919	nil (b)	2.24 14/13	5.7
March ..	.348	47	58	36	1.05	6	4.60 1878	nil (c)	3.50 5/78	11.1
April ..	.336	56	72	37	1.76	9	6.78 1853	0.03 1923	3.15 5/60	13.9
May ..	.319	67	76	49	2.76	14	7.75 1875	0.20 1891	2.75 1/53	15.7
June ..	.300	77	84	69	3.15	16	8.58 1916	0.42 1886	2.11 1/20	15.7
July ..	.276	76	87	68	2.65	16	5.38 1865	0.37 1899	1.75 10/65	17.3
August ..	.246	69	77	54	2.51	16	6.24 1852	0.35 1914	2.23 10/51	16.5
September ..	.297	61	72	44	2.04	14	5.83 1923	0.45 1896	1.59 20/23	15.7
October ..	.300	51	67	29	1.74	11	3.83 1870	0.17 1914	2.24 16/08	12.7
November ..	.312	43	57	31	1.16	8	3.55 1851	0.04 1885	1.88 28/58	7.0
December ..	.325	39	50	33	1.00	6	3.98 1861	nil 1904	2.42 23/13	4.9
Year { Totals ..	—	—	—	—	21.21	124	—	—	—	140.4
Averages ..	.311	53	—	—	—	—	8.58 6/16	nil (d)	3.50 5/3/78	—
Extremes ..	—	—	87	29	—	—	—	—	—	—

(a) 1848, &c.

(b) 1848, &c.

(c) 1859, &c.

(d) January, February, March and December, various years.

CLIMATOLOGICAL DATA—BRISBANE, QUEENSLAND.

LAT. 27° 28' S., LONG. 153° 2' E. HEIGHT ABOVE M.S.L. 137 Ft.

BAROMETER, WIND, EVAPORATION, LIGHTNING, CLOUDS, AND CLEAR DAYS.

Month.	Bar. corrected to 32° F. Mm. Sea Level and Standard Gravity from 9 a.m. and 3 p.m. readings.	Wind.				Mean Amount of Evaporation (inches).	No. of Days Lightning.	Mean Amount of Clouds, 9 a.m. to 3 p.m. & 9 p.m.	No. of Clear Days.
		Greatest Number of Miles in one day.	Mean Hourly Pressure. (lbs.)	Total Miles.	Prevailing Direction.				
No. of yrs. over which observation extends.	38	14	14	14	38	16	38	33	16
January	29.867	361 1/22	0.12	4,696	E & S E	6.881	6.0	5.7	3.3
February	29.902	347 5/22	0.13	4,600	S E	5.332	5.3	5.7	1.9
March	29.958	305 29/16	0.10	4,272	S E & S	4.947	4.6	5.2	5.1
April	30.050	370 27/23	0.09	3,980	S	3.784	3.2	4.6	7.7
May	30.086	307 20/22	0.08	3,759	S	2.882	3.3	4.3	8.8
June	30.064	400 12/24	0.10	3,701	S	2.235	2.2	4.2	8.8
July	30.072	359 2/23	0.08	3,804	S to W	2.463	2.4	3.7	11.5
August	30.096	331 6/23	0.09	4,042	S	3.056	3.6	3.5	11.8
September	30.036	322 14/23	0.08	3,766	S	3.922	5.9	3.5	12.2
October	30.003	325 25/18	0.09	4,149	N E	5.382	6.9	4.0	8.4
November	29.955	274 18/23	0.12	4,503	N E	6.009	8.4	4.7	6.6
December	29.888	303 24/24	0.13	4,846	N E	6.831	8.8	5.2	3.7
Year { Totals	—	—	—	—	S to E and N E	53.814	60.6	—	89.8
Year { Averages	29.998	—	0.10	4,176	—	—	—	4.5	—
Year { Extremes	—	400 12/6/24	—	—	—	—	—	—	—

TEMPERATURE AND SUNSHINE.

Month.	Mean Temperature (Fahr.).			Extreme Shade Temperature (Fahr.).		Extreme Range.	Extreme Temperature (Fahr.).		Mean Hours of Sunshine.
	Mean Max.	Mean Min.	Mean.	Highest.	Lowest.		Highest in Sun.	Lowest on Grass.	
No. of yrs. over which observation extends.	38	38	38	38	38	38	38	38	16
January	85.5	68.9	77.2	108.9 14/02	58.8 4/93	50.1	166.4 10/17	49.9 4/93	225.4
February	84.5	68.3	76.4	101.9 11/04	58.7 (a)	43.2	165.2 6/10	49.3 9/89	203.8
March	82.4	66.3	74.4	99.4 5/19	52.4 29/13	47.0	160.0 1/87	45.4 29/13	210.1
April	79.0	61.6	70.3	95.2 (b)	48.6 17/00	46.6	153.8 11/16	37.0 17/00	203.7
May	73.7	55.4	64.6	90.3 21/23	41.3 24/99	47.5	147.0 1/10	29.8 8/97	197.5
June	69.4	51.0	60.2	88.9 19/18	36.3 29/08	52.6	136.0 3/18	25.4 23/88	169.9
July	68.4	48.6	58.5	83.4 28/98	36.1 (c)	47.3	146.1 20/15	23.9 11/90	196.1
August	71.1	49.8	60.4	87.5 28/07	37.4 6/87	50.1	141.9 20/17	27.1 9/99	231.2
September	75.8	54.9	65.4	95.2 16/12	40.7 1/96	54.5	155.5 26/03	30.4 1/89	233.5
October	79.8	59.9	69.8	101.4 18/93	43.3 3/99	58.1	157.4 31/18	34.9 8/89	249.9
November	82.9	64.2	73.6	106.1 18/13	48.5 2/05	57.6	162.3 7/89	38.8 1/05	243.2
December	85.2	67.5	76.4	105.9 26/93	56.4 13/12	49.5	160.4 7/14	49.1 3/94	241.1
Year { Averages	78.1	59.7	68.9	—	—	—	—	—	2605.4d
Year { Extremes	—	—	—	108.9 14/1/02	36.1 (c)	72.8	166.4 10/1/17	23.9 11/7/90	—

(a) 10 and 11/04.

(b) 9/96 and 5/03.

(c) 12/94 and 2/96.

(d) Total for year.

HUMIDITY, RAINFALL, AND DEW.

Month.	Vapour Pressure (inches).	Rel. Hum. (%)				Rainfall (inches).				Dew.
		Mean 9 a.m.	Mean 3 p.m.	Highest Mean.	Lowest Mean.	Mean Monthly.	Mean No. of Days Rain.	Greatest Monthly.	Least Monthly.	
No. of yrs. over which observation extends.	38	38	38	38	73	65	73	73	73	38
January .. ..	.654	67	79	53	6.31	14	27.72 1895	0.32 1919	18.31 21/87	6.4
February .. ..	.655	70	82	55	6.31	14	40.39 1893	0.58 1849	8.36 16/93	6.5
March .. ..	.628	72	85	56	5.76	15	34.04 1870	nil 1849	11.18 14/08	9.9
April .. ..	.533	73	80	60	3.61	12	15.28 1867	0.04 1897	4.47 13/16	12.3
May .. ..	.430	74	85	64	2.83	10	13.85 1876	nil 1846	5.62 9/79	13.5
June .. ..	.352	74	84	67	2.67	8	14.03 1873	nil 1847	6.01 9/93	11.5
July .. ..	.333	74	81	61	2.35	8	8.46 1889	nil 1841	3.54 (a)	12.8
August .. ..	.348	69	80	61	2.11	7	14.67 1879	nil (b)	4.89 12/87	10.8
September .. ..	.418	65	76	47	2.08	9	5.43 1886	0.10 1907	2.46 2/94	10.7
October .. ..	.485	61	72	49	2.57	9	9.99 1882	0.14 1900	1.95 20/89	8.8
November .. ..	.551	60	72	46	3.65	10	12.40 1917	nil 1842	4.46 16/86	5.8
December .. ..	.618	63	70	52	4.89	12	13.99 1910	0.35 1865	6.60 23/71	5.3
Year { Totals	—	—	—	—	45.14	128	—	—	—	114.3
Year { Averages .. ..	.500	68	—	—	—	—	—	—	—	—
Year { Extremes	—	—	85	46	—	—	40.39 2/1893	nil (c)	18.31 21/1/87	—

(a) 15/76, 16/89. (b) 1862, 1869, 1880. (c) March, May, June, July, Aug., Nov., various years.

CLIMATOLOGICAL DATA—SYDNEY, NEW SOUTH WALES.

LAT. 33° 52' S., LONG. 151° 12' E. HEIGHT ABOVE M.S.L., 138 FT.

BAROMETER, WIND, EVAPORATION, LIGHTNING, CLOUDS, AND CLEAR DAYS.

Month.	Bar. corrected to 32° F. Mm. Sea Level and Standard Gravity from 24 hourly readings.	Wind.				Mean Amount of Evaporation (inches).	No. of Days Lightning.	Mean Amount of Clouds, 9 a.m., 3 p.m. & 9 p.m.	No. of Clear Days.
		Greatest Number of Miles in One Day.	Mean Hourly Pressure. (lbs.)	Total Miles.	Prevailing Direction.				
No. of yrs. over which observation extends	66	58	58	58	58	45	65	63	61
January ..	29.898	721 1/71	0.33	8,066	N E	5.292	4.8	5.8	2.4
February ..	29.945	871 12/69	0.31	6,921	N E	4.145	4.2	6.0	1.7
March ..	30.011	943 20/70	0.24	6,714	N E	3.576	4.1	5.5	2.3
April ..	30.074	803 6/82	0.21	6,065	N E	2.556	3.8	5.1	3.2
May ..	30.081	758 6/98	0.22	6,281	W	1.774	3.3	4.8	3.8
June ..	30.056	712 7/00	0.27	6,834	W	1.426	2.2	4.8	4.2
July ..	30.075	930 17/79	0.27	7,033	W	1.512	2.4	4.4	5.0
August ..	30.070	756 22/72	0.25	6,790	W	1.877	3.2	4.0	5.4
September ..	30.005	964 6/74	0.29	7,040	W	2.654	4.1	4.4	4.5
October ..	29.969	926 4/72	0.31	7,688	N E	3.836	4.9	4.9	3.0
November ..	29.939	720 13/68	0.32	7,523	N E	4.565	5.4	5.5	2.2
December ..	29.881	938 3/84	0.32	7,937	N E	5.332	5.7	5.6	2.4
Year { Totals ..	—	—	—	—	—	38.545	48.1	—	40.1
Averages ..	30.000	—	0.28	7,074	N E	—	—	5.1	—
Extremes ..	—	964 6/9/74	—	—	—	—	—	—	—

TEMPERATURE AND SUNSHINE.

Month.	Mean Temperature (Fahr.).			Extreme Shade Temperature (Fahr.).		Extreme Range.	Extreme Temperature (Fahr.).		Mean Hours of Sunshine.
	Mean Max.	Mean Min.	Mean.	Highest.	Lowest.		Highest in Sun.	Lowest on Grass.	
No. of yrs. over which observation extends	66	66	66	66	66	66	63	66	14
January ..	78.5	64.9	71.7	108.5 13/96	51.2 14/65	57.3	164.3 26/15	44.2 18/97	210.0
February ..	77.6	64.9	71.2	101.9 18/23	49.3 28/63	52.6	156.5 7/64	43.4 25/91	182.2
March ..	75.7	62.9	69.3	102.6 3/69	48.8 14/86	53.8	158.0 19/11	39.9 17/13	193.1
April ..	71.2	58.1	64.6	91.0 20/22	44.6 27/64	46.4	144.1 10/77	33.3 24/09	151.4
May ..	65.4	52.2	58.8	86.0 1/19	40.2 22/59	45.8	129.7 1/96	29.3 25/17	138.1
June ..	60.9	48.2	54.6	79.8 2/23	38.0 5/20	41.8	125.5 2/23	28.1 24/11	125.8
July ..	59.4	45.9	52.6	74.9 17/71	35.9 12/90	39.0	124.7 19/77	24.0 4/93	136.8
August ..	62.6	47.5	55.0	82.0 31/84	36.8 3/72	45.2	149.0 30/78	26.1 4/09	185.8
September ..	66.9	51.5	59.2	92.3 27/19	40.8 18/64	51.5	142.2 12/78	30.1 17/05	187.6
October ..	71.2	55.8	63.5	99.7 19/98	42.3 3/18	57.4	151.9 (a)	32.7 9/05	208.0
November ..	74.5	59.6	67.1	102.7 21/78	45.8 1/05	56.9	158.5 28/99	36.0 6/08	200.4
December ..	77.3	62.9	70.1	107.5 31/04	48.4 3/24	59.1	164.5 27/89	41.4 3/24	203.8
Year { Averages ..	70.1	56.2	63.2	—	—	—	—	—	2125.06
Extremes ..	—	—	—	108.5 13/1/96	35.9 12/7/90	72.6	164.5 27/12/89	24.0 4/7/03	—

(a) 30 and 31/14.

(b) Total for year.

HUMIDITY, RAINFALL, AND DEW.

Month.	Vapour Pressure (inches.)	Rel. Hum. (%)				Rainfall (inches).				Dew.
		Mean 9 a.m.	Highest Mean.	Lowest Mean.	Mean Monthly.	Mean No. of Days Rain.	Greatest Monthly.	Least Monthly.	Greatest in One Day.	
No. of yrs. over which observation extends	66	66	66	66	66	66	66	66	66	66
January ..	.566	67	78	58	3.65	14	15.26 1911	0.42 1888	7.08 13/11	1.2
February ..	.567	70	81	59	4.33	14	18.56 1873	0.34 1902	8.90 25/73	2.0
March ..	.534	72	85	62	4.92	15	18.70 1870	0.42 1876	6.52 9/13	3.3
April ..	.459	76	87	63	5.42	14	24.49 1861	0.06 1868	7.52 29/60	5.5
May ..	.335	74	90	63	5.04	15	23.03 1919	0.18 1860	8.36 28/89	6.2
June ..	.292	78	89	68	4.78	13	16.30 1885	0.19 1904	5.17 16/84	5.3
July ..	.269	75	88	65	4.97	12	13.21 1900	0.12 1862	5.72 28/08	5.3
August ..	.294	71	84	56	3.02	11	14.89 1899	0.04 1885	5.33 2/60	4.9
September ..	.352	67	79	49	2.90	12	14.05 1879	0.08 1882	5.69 10/79	3.4
October ..	.402	63	77	46	2.91	12	11.14 1916	0.21 1867	6.37 13/02	3.0
November ..	.466	64	79	42	2.82	12	9.89 1865	0.07 1915	4.23 19/00	2.1
December ..	.530	66	77	52	2.82	13	15.82 1920	0.23 1913	4.75 13/10	1.4
Year { Totals ..	—	—	—	—	47.58	157	—	—	—	43.6
Averages ..	.421	70	—	—	—	—	—	—	—	—
Extremes ..	—	—	90	42	—	—	24.49 April/61	0.04 Aug./85	8.90 25/2/73	—

CLIMATOLOGICAL DATA—MELBOURNE, VICTORIA.

LAT. 37° 49' S., LONG. 144° 58' E. HEIGHT ABOVE M.S.L., 115 FT.

BAROMETER, WIND, EVAPORATION, LIGHTNING, CLOUDS, AND CLEAR DAYS.

Month.	Bar. corrected to 32° F. M. Sea Level and Standard Gravity from 9 a.m., 3 & 9 p.m. readings.	Wind.				Mean Amount of Evaporation (inches).	No. of Days Lightning.	Mean Amount of Clouds 9 a.m. 3 p.m. & 9 p.m.	No. of Clear Days.
		Greatest Number of Miles in One Day.	Mean Hourly Pressure. (lbs.)	Total Miles.	Prevailing Direction.				
No. of yrs. over which observation extends	67	51	51	51	51	52	17	67	17
January ..	29.910	583 10/97	0.27	7,269	S W, S E	6.426	1.8	5.1	7.4
February ..	29.960	566 8/68	0.25	6,308	S W, S E	5.056	2.7	5.0	7.1
March ..	30.033	677 9/81	0.20	6,275	S W, S E	3.976	1.6	5.5	5.1
April ..	30.105	597 7/68	0.19	5,066	S W, N W	2.375	0.8	5.8	4.6
May ..	30.103	693 12/65	0.19	5,819	N W, N E	1.469	0.6	6.5	3.2
June ..	30.071	761 13/76	0.22	6,345	N W, N E	1.094	0.8	6.7	3.2
July ..	30.094	755 8/74	0.21	6,305	N W, N E	1.050	0.5	6.3	3.2
August ..	30.065	637 14/75	0.24	6,762	N W, N E	1.468	1.1	6.3	3.9
September ..	29.996	617 11/72	0.26	6,943	N W, S W	2.299	1.6	6.1	3.6
October ..	29.965	899 5/66	0.27	7,231	S W, N W	3.341	2.2	6.0	4.1
November ..	29.948	734 13/66	0.27	6,953	S W, S E	4.535	2.5	5.9	3.5
December ..	29.897	655 1/75	0.27	7,393	S W, S E	5.761	1.9	5.5	4.2
Year { Totals	—	—	—	—	—	—	—	—	—
Averages	30.012	—	0.24	6,608	S W, N W	38.853	18.1	—	51.1
Extremes	—	899 5/10/66	—	—	—	—	—	5.9	—

TEMPERATURE AND SUNSHINE.

Month.	Mean Temperature (Fahr.).			Extreme Shade Temperature (Fahr.).		Extreme Range.	Extreme Temperature (Fahr.).		Mean Hours of Sunshine.
	Mean Max.	Mean Min.	Mean.	Highest.	Lowest.		Highest in Sun.	Lowest on Grass.	
No. of yrs. over which observation extends	69	69	69	69	69	69	65	65	43
January ..	78.1	56.8	67.4	111.2 14/62	42.0 28/85	69.2	178.5 14/62	30.2 28/85	266.8
February ..	78.0	57.1	67.5	109.5 7/01	40.2 24/24	69.3	167.5 15/70	30.9 6/91	244.4
March ..	74.3	54.6	64.5	105.5 2/93	37.1 17/84	68.4	164.5 1/68	28.9 (b)	207.3
April ..	68.4	50.7	59.5	94.0 (a)	34.8 24/88	59.2	152.0 5/61	25.0 23/97	163.1
May ..	61.5	46.7	54.1	83.7 7/05	29.9 29/16	53.8	142.6 2/59	21.1 26/16	141.3
June ..	56.8	44.1	50.4	72.2 1/07	25.0 11/66	44.2	129.0 11/61	20.4 17/95	111.5
July ..	55.6	41.7	48.6	68.4 24/78	27.0 21/69	41.4	125.8 27/80	20.5 12/03	106.8
August ..	58.7	43.4	51.0	77.0 20/85	28.3 11/63	48.7	137.4 28/69	21.3 14/02	155.5
September ..	62.6	45.6	54.1	85.0 19/19	31.1 16/08	53.9	142.1 20/67	22.8 8/18	172.1
October ..	67.0	48.2	57.6	98.4 24/14	32.1 3/71	66.3	154.3 28/68	24.8 22/18	206.7
November ..	71.3	51.2	61.3	105.7 27/94	36.5 2/96	69.2	159.6 29/65	24.6 2/96	244.2
December ..	75.3	54.2	64.8	110.7 15/76	40.0 4/70	70.7	170.3 20/69	33.2 1/04	256.9
Year { Averages	67.3	49.5	58.4	—	—	—	—	—	2277.0c
Extremes	—	—	—	111.2 14/1/62	27.0 21/7/69	84.2	178.5 14/1/62	20.4 17/6/95	—

(a) 6/1865 and 17/1922.

(b) 17/1884 and 20/1897.

(c) Total for year.

HUMIDITY, RAINFALL, AND DEW.

Month.	Vapour Pressure (inches)	Rel. Hum. (%)				Rainfall (inches).				Dew. Mean No. Days Dew.
	Mean 9 a.m.	Mean 9 a.m.	Highest Mean.	Lowest Mean.	Mean Monthly.	Mean No. of Days Rain.	Greatest Monthly.	Least Monthly.	Greatest in One Day.	
No. of yrs. over which observation extends	17	17	17	17	69	69	69	69	66	17
January ..	.383	58	65	50	1.87	8	5.68 1904	0.04 1878	2.97 9/97	2.1
February ..	.417	62	69	53	1.74	7	6.24 1904	0.03 1870	3.37 18/19	2.7
March ..	.376	64	71	57	2.23	9	7.50 1911	0.18 1859	3.55 5/19	7.2
April ..	.338	71	78	66	2.21	11	6.71 1901	Nil 1923	2.28 22/01	8.4
May ..	.318	78	84	71	2.18	13	4.31 1862	0.45 1901	1.85 7/91	8.6
June ..	.283	83	88	77	2.08	14	4.51 1859	0.73 1877	1.74 21/04	8.3
July ..	.260	82	86	76	1.85	14	7.02 1891	0.57 1902	2.71 12/91	10.0
August ..	.272	76	82	70	1.89	14	4.04 1924	0.48 1903	1.94 26/24	8.3
September ..	.292	69	76	60	2.47	14	7.93 1916	0.52 1907	2.62 12/80	6.4
October ..	.304	62	67	56	2.67	13	7.61 1869	0.29 1914	3.00 17/69	6.2
November ..	.330	59	69	52	2.26	11	6.71 1916	0.25 1895	2.57 16/76	1.9
December ..	.358	57	69	51	2.33	9	7.18 1863	0.11 1904	2.62 28/07	2.0
Year { Totals	—	—	—	—	25.78	137	—	—	—	72.1
Averages	.319	68	—	—	—	—	—	—	—	—
Extremes	—	—	88	50	—	—	7.93 9/16	Nil 4/23	3.55 5/3/19	—

CLIMATOLOGICAL DATA—HOBART, TASMANIA.

LAT. 42° 53' S., LONG. 147° 20' E. HEIGHT ABOVE M.S.L., 177 FT.

BAROMETER, WIND, EVAPORATION, LIGHTNING, CLOUDS, AND CLEAR DAYS.

Month.	Bar. corrected to 32° F. Mm. Sea Level and Standard Gravity from 9 a.m. and 3 p.m. readings.	Wind.				Mean Amount of Evaporation (inches).	No. of Days Lightning.	Mean Amount of Cloud, 9 a.m. 3 p.m. & 9 p.m.	No. of Clear Days.
		Greatest Number of Miles in One Day.	Mean Hourly Pressure. (lbs.)	Total Miles.	Prevailing Direction. 9 a.m. 3 p.m.				
No. of yrs. over which observation extends	40	14	14	14	19	14	17	62	18
January ..	29.826	500 30/16	0.19	5,995	NNW SE	5.045	0.9	5.9	2.5
February ..	29.925	393 19/13	0.13	4,567	NNW SE	3.714	1.4	6.0	2.5
March ..	29.937	407 16/21	0.13	4,962	NNW SE	2.967	1.2	5.9	2.0
April ..	29.965	475 12/22	0.14	4,877	NNW NW	1.990	0.8	6.0	1.8
May ..	29.982	411 3/16	0.12	4,844	NNW NNW	1.379	0.6	6.0	2.1
June ..	29.938	569 27/20	0.13	4,757	NNW NNW	0.891	0.7	6.1	1.7
July ..	29.934	425 16/21	0.12	4,767	NNW NNW	0.899	0.6	5.8	2.6
August ..	29.927	459 30/11	0.13	4,873	NNW NNW	1.247	0.6	5.9	2.1
September ..	29.844	516 26/15	0.18	5,514	NNW NW	1.985	0.9	6.1	1.7
October ..	29.834	461 8/12	0.18	5,757	NNW SE	3.116	0.9	6.3	1.6
November ..	29.798	508 18/15	0.20	5,873	NNW SE	4.030	0.9	6.3	1.6
December ..	29.808	486 30/20	0.18	5,725	NNW SE	4.562	1.1	6.2	1.1
Year { Totals ..	—	—	—	—	—	31.825	10.6	—	23.3
Averages ..	29.893	—	0.15	5,210	NNW SE & NNW	—	—	6.0	—
Extremes ..	—	569 27/6/20	—	—	—	—	—	—	—

TEMPERATURE AND SUNSHINE.

Month.	Mean Temperature (Fahr.).			Extreme Shade Temperature (Fahr.).		Extreme Range.	Extreme Temperature (Fahr.).		Mean Hours of Sunshine.
	Mean Max.	Mean Min.	Mean.	Highest.	Lowest.		Highest in Sun.	Lowest on Grass.	
No. of yrs. over which observation extends	54	54	54	78	78	78	37	57	30
January ..	71.3	52.9	62.1	105.0 1/00	40.3 (a)	64.7	160.0	30.6 19/97	210.2
February ..	71.3	53.3	62.3	104.4 12/99	39.0 20/87	65.4	165.0 24/98	28.3 -/87	177.2
March ..	68.0	50.8	59.4	98.8 5/46	36.0 31/05	62.8	150.0 3/05	27.5 30/02	173.0
April ..	62.7	47.6	55.2	90.0 2/56	30.0 25/56	60.0	142.0 18/93	25.0 -/86	140.5
May ..	57.4	43.6	50.5	77.8 5/21	29.2 20/02	48.6	128.0 (c)	20.0 19/02	132.3
June ..	52.8	41.0	46.9	75.0 7/74	28.0 22/79	47.0	122.0 12/94	21.0 6/87	102.9
July ..	52.0	39.3	45.6	72.0 22/77	27.0 18/66	45.0	121.0 12/93	18.7 16/86	124.1
August ..	55.0	41.1	48.0	77.0 3/76	30.0 10/73	47.0	129.0 -/87	20.1 7/09	142.2
September ..	58.8	43.2	51.0	80.0 9/72	30.0 12/41	50.0	138.0 23/93	22.3 20/14	144.5
October ..	62.7	45.4	54.0	92.0 24/14	32.0 12/89	60.0	156.0 9/93	23.8 (d)	168.9
November ..	66.1	48.3	57.2	98.0 20/88	35.2 5/13	62.8	154.0 19/92	26.0 1/08	198.1
December ..	69.4	51.2	60.3	105.2 30/97	38.0 13/06	67.2	157.0 30/18	27.2 -/86	194.1
Year { Averages ..	62.3	46.5	54.4	—	—	—	—	—	1908.0e
Extremes ..	—	—	—	105.2 30/12/97	27.0 18/7/66	78.2	165.0 24/2/98	18.7 16/7/86	—

(a) 3/72 and 2/00. (b) 5/86 and 13/05. (c) -/88 and -/92. (d) 1/86 and -/99. (e) Total for Year.

HUMIDITY, RAINFALL, AND DEW.

Month.	Vapour Pressure (inches).	Rel. Hum. (%)				Rainfall (inches).						Dew.	
		Mean 9 a.m.	Mean 9 a.m.	Highest Mean.	Lowest Mean.	Mean Monthly.	Mean No. of Days Rain.	Greatest Monthly.		Least Monthly.		Greatest in One Day.	Mean No. Days Dew.
No. of yrs. over which observation extends	41	41	41	41	82	81	82		82		58		15
January ..	.348	63	77	51	1.85	10	5.91	1893	0.03	1841	2.96	30/16	0.7
February ..	.356	65	80	51	1.14	8	9.15	1854	0.07	1847	4.50	25/54a	1.9
March ..	.323	68	78	58	1.71	10	7.60	1854	0.02	1843	2.79	5/19	4.4
April ..	.307	73	84	61	1.86	12	6.50	1909	0.07	1904	5.02	20/09	10.6
May ..	.267	78	88	68	1.87	13	6.37	1905	0.10	1843	3.22	14/58	13.3
June ..	.245	82	92	68	2.21	14	8.15	1889	0.22	1852	4.11	14/89	8.4
July ..	.234	80	88	72	2.17	14	6.02	1922	0.30	1850	2.51	18/22	8.2
August ..	.249	77	85	64	1.84	14	10.16	1858	0.23	1854	4.35	12/58	9.0
September ..	.266	71	82	60	2.11	14	7.14	1844	0.39	1847	3.50	29/44	4.7
October ..	.273	66	80	51	2.24	15	6.67	1906	0.26	1850	2.58	4/06	3.1
November ..	.294	63	78	50	2.52	14	8.92	1849	0.16	1868	3.97	6/49	1.3
December ..	.312	61	79	49	1.99	11	9.00	1875	0.11	1842	2.48	13/16	0.9
Year { Totals ..	—	—	—	—	23.83	149	—		—		—		66.5
Averages ..	.282	70	—	—	—	—	—		—		—		—
Extremes ..	—	—	92	49	—	—	10.16	8/1858	0.02	3/1843	5.02	20/4/09	—

(a) 4.18 on 26/54 also.

CHAPTER III.

GENERAL GOVERNMENT.

§ 1. Scheme of Parliamentary Government.

1. **General.**—The legislative power of the Commonwealth is vested in the Parliament of the Commonwealth, which consists of the Sovereign, the Senate, and the House of Representatives. The Sovereign is represented throughout the Commonwealth by the Governor-General who, subject to the Constitution of the Commonwealth, has such powers and functions as the Sovereign is pleased to assign to him. In each State there is a State Governor, who is the representative of the Sovereign for the State, and who exercises such powers within the State as are conferred upon him by the Letters Patent which constitute his office, and by the instructions, which inform him in detail of the manner in which his duties are to be fulfilled. The Legislature in each State was bi-cameral till 1922, in which year the Queensland Parliament became uni-cameral. In the bi-cameral States it consists of (a) a Legislative Council and (b) a Legislative Assembly, or House of Assembly. In Queensland the Legislative Assembly constitutes the Parliament. In the Commonwealth Parliament the Upper House is known as the Senate, and in the State Parliaments as the Legislative Council. The Lower House in the bi-cameral States is known as follows:—In the Commonwealth Parliament as the House of Representatives, in the State Parliaments of New South Wales, Victoria, and Western Australia as the Legislative Assembly, and in the State Parliaments of South Australia and Tasmania as the House of Assembly. The legislative powers of these Parliaments are delimited by the Commonwealth and the State Constitutions. The Assembly (Queensland as pointed out above is now uni-cameral), which is the larger, is always elective, the qualifications for the franchise varying in character. The Council is, in the case of New South Wales, nominated by the Governor-in-Council; in other States it is elective, the constituencies being differently arranged and some property or special qualification for the electorate being required. In the Federal Parliament, however, the qualifications for the franchise are identical for both Houses. A brief account of the constitutional history of each of the States is given in Chapter I., and a conspectus of the Constitutions of the Commonwealth and States in Year Book No. 13, pp. 927 to 951. The information given therein respecting Queensland must of course be considerably modified in view of the abolition of the Upper House in 1922.

2. **Powers and Functions of the Governor-General and of the Governors.**—The Governor-General and the State Governors act under the authority of the Commissions by which they are appointed and the Letters Patent under the Great Seal of the United Kingdom, and according to instructions issued by the Colonial Office and passed under the Royal Sign Manual and Signet.

The office of Governor-General and Commander-in-Chief of the Commonwealth was constituted by Letters Patent issued on the 29th October, 1900, in pursuance of the provisions of the Commonwealth Constitution Act (see page 21 hereinbefore). The powers and duties of the Governor-General were further defined by Royal instructions issued on the same date. The principal and most important of his functions, legislative as well as executive, are expressly conferred upon him by the terms of the Constitution itself. He is the custodian of the Great Seal of the Commonwealth, and has the appointment of political officers to administer Departments of State of the Commonwealth.

His legislative functions are exercised with respect to proposed laws as finally passed by the Federal Houses of Parliament. Such Bills are presented to the Governor-General for his assent in the King's name, on receiving which they become law throughout the Commonwealth. The Governor-General may, however, withhold his assent, or may reserve any Bill for the King's pleasure. He may return to the House in which it originated any proposed law with suggested amendments. The King may disallow any law within one year from the date on which it was assented to by the Governor-General.

The Governor-General's executive functions are, under ordinary circumstances, exercised on the advice of his responsible Ministers. Various specific powers are vested in him by the Constitution; he may summon or prorogue Parliament and may dissolve the House of Representatives. He is the Commander-in-Chief of the military and naval forces of the Commonwealth, and is invested by the Crown with the prerogative of mercy in cases of offences committed against the laws of the Commonwealth.

The Governor-General is also invested with authority in certain matters of Imperial interest, such as the control of the naval and military forces of the Commonwealth; the observance of the relations of foreign States to Great Britain, so far as they may be affected by the indirect relations of such States to the Commonwealth; and the treatment of neutral and belligerent ships in Commonwealth waters in time of war.

The Governor-General may not leave the Commonwealth without having first obtained leave from the Imperial Government, to whom alone he is responsible for his official acts.

The powers and functions of the State Governors are, within their respective States, very similar to those exercised by the Governor-General for the Commonwealth, and are defined by the terms of their Commissions and by the Royal instructions accompanying the same. A State Governor is the official head of the State Legislature, and assents in the name of the Crown to all Bills passed by the Parliament, except those reserved for the Royal Assent. The latter include certain classes of Bills, which are regulated by the Constitution Acts and by the instructions issued by the Imperial Government. The Governors are, under ordinary circumstances, guided by their Executive Councils, the chief matters in which the exercise of discretion is required being the granting or withholding of a dissolution of Parliament when requested by a Premier; the appointment of a new Ministry; or the assenting to, vetoing, or reserving of Bills passed by the legislative chambers. The Governors are authorized, under certain restrictions, to administer the prerogative of mercy by the reprieve or pardon of criminal offenders within their jurisdiction, and to remit fines and penalties due to the Crown. All moneys to be expended for the public service are issued from the Treasury under the Governor's warrant.

In a publication* in which the above matters are exhaustively discussed, it is indicated that there are important functions in the hands of a Governor, and that his influence may extend beyond what is anticipated by those who are unfamiliar with the activities of actual government. This is, however, essentially a matter of individual character. A Governor is entitled to the fullest confidence of his Ministers, to be informed at once of any important decisions taken by his Cabinet, and to discuss them with the utmost freedom. He can point out objections, give advice, deprecate measures, and urge alterations, subject, however, to his remaining always behind the scenes. It should be remembered, moreover, that the State Executive Councils owe their existence to the Royal Letters Patent constituting the office of Governor and that, in law, the Governor is never bound to accept the advice of his Ministers. He cannot indeed do many things without their advice, for it is provided by law (either in the Constitution or Interpretation Acts, or by authoritative usage) that a Governor-in-Council must act on the advice of the Council. He cannot therefore perform any act in Council without a majority, though he can always refuse to act, and thus force his Ministers either to give way on the point at issue or to resign their posts. Even in the case of a ministerial act,

* "Responsible Government in the Dominions," A. B. Keith, Oxford, Clarendon Press, 1912, Vol. I.

he can forbid a Minister to take any action on pain of dismissal. Nominally a Governor will, of course, be justified in accepting the advice of his Ministers as being a correct statement of the facts and law, but he is not bound to be so satisfied, and in matters of law he must exercise his own judgment if he be in doubt. A Governor is not, however, entitled to refuse to act on the advice of his Ministers because he personally does not approve of their action or policy; his duty is not to his own conscience, but to the people of the State which he governs, and he should execute that duty independently of every other consideration.

Although the above furnishes a brief résumé of the powers of a Governor from a legal point of view, in practice the exercise of his powers is generally limited by his ability to persuade his Ministers as to the desirability of any particular course of action. Disagreement with Ministers is only justifiable in extreme cases, and even then it involves the responsibility of finding other Ministers, who must either show that they have as much support as any other party, or be prepared to administer during a dissolution, pending an appeal to the people. It may be remarked that a Governor who cannot work with Ministers possessing the support of the people must be recalled, unless he has acted on Imperial grounds, and the dispute is not one between him and Ministers, but between the Imperial and State Governments.

It may also be pointed out that a Governor, besides acting according to law, has, within the range of what is lawful, to act according to the instructions of the Secretary of State. He is called upon to do so by the instruments which create his office and appoint him Governor, and he obeys the Secretary of State as the mouthpiece of the Crown. Historically, there have been many cases in which these instructions have placed Governors in opposition to their Ministers.

3. Governor-General and State Governors.—The present Governor-General is the Right Honourable HENRY WILLIAM, BARON FORSTER OF LEPE, P.C., G.C.M.G. He assumed office on the 6th October, 1920.

The following is a list of the Governors of the various States of the Commonwealth :—

New South Wales ..	Admiral SIR DUDLEY RAWSON STRATFORD DE CHAIR, K.C.B., M.V.O.
Victoria	Colonel the Rt. Hon. GEORGE EDWARD JOHN MOWBRAY, EARL OF STRADBROKE, K.C.M.G., C.B., C.V.O., C.B.E., A.D.C. to H.M. the King.
Queensland ..	Lieutenant-Colonel the Rt. Hon. SIR MATTHEW NATHAN, P.C., G.C.M.G.
South Australia ..	Lieut.-General SIR GEORGE TOM MOLESWORTH BRIDGES, K.C.B., K.C.M.G., D.S.O.
Western Australia ..	Colonel SIR WILLIAM ROBERT CAMPION, K.C.M.G., D.S.O.
Tasmania	Captain SIR JAMES O'GRADY, K.C.M.G., J.P.

4. The Cabinet and Executive Government.—(i) *General.* The sections of the Commonwealth Constitution Act dealing with the Executive Government will be found on page 29 hereinbefore. In both the Commonwealth and the State Legislatures the forms of government have been founded on their prototypes in the Imperial Government, and the relations established between the Ministry and the representatives of the people are in accordance with those prevailing in Great Britain. The executive powers in the Commonwealth and in the State Governments are vested in the Governor-in-Council. The Executive Council in the Commonwealth and in the majority of the States is practically co-extensive with a group of departmental chiefs, who are usually spoken of as the Cabinet, and who change with the rise and fall of party majorities. In the Commonwealth

Government, however, as well as in the States of Victoria and Tasmania, the Cabinet on leaving office remain members of the Executive Council, though they no longer attend its meetings, and it is in fact an essential feature of the Cabinet system of Government that they should not do so, except to assist the Governor in transacting purely formal business, or to advise on non-political questions.

(ii) *The Executive Council.* This body is composed of the Governor and the Ministers of State holding office for the time being. The latter are sworn both as Executive Councillors and as Ministers controlling the different administrative departments. It should be observed that all persons living who have held Ministerial office under former Governments are also technically members of the Executive Council, and are thus liable to be specially summoned for attendance at meetings of that body. The meetings are official in character; they are presided over by the Governor-General (or Governor) and are attended by the clerk, who keeps a formal record of the proceedings. At these meetings the decisions of the Cabinet are put into official form and made effective, appointments are confirmed, resignations accepted, proceedings ordered, and notices and regulations published.

(iii) *The Appointment of Ministers and of Executive Councillors.* Although it is technically possible for the Governor to make and unmake cabinets at his pleasure, under all ordinary circumstances his apparent liberty in choosing his Executive Council is virtually restricted by the operation of constitutional machinery. When a Ministry is defeated in Parliament or at the polls, the procedure both in the Commonwealth and the State Parliaments generally, though not invariably, follows that prevailing in the Imperial Parliament. The customary procedure in connexion with the resignation or acceptance of office by a Ministry is described fully in previous issues of the Year Book. (See No. 6, page 942.)

(iv) *Ministers in Upper or Lower Houses.* The subjoined table shows the number of Ministers with seats in the Upper or Lower Houses of each Parliament in March, 1925 :—

AUSTRALIAN PARLIAMENTS—MINISTERS IN UPPER OR LOWER HOUSES,
1925.

Ministers with Seats in—	C'wealth.	N.S.W.	Vict.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
The Upper House ..	3	3	4	..	1	2	1	14
The Lower House ..	9	9	8	10	5	7	4	52
Total	12	12	12	10	6	9	5	66

(v) *The Cabinet.* (a) *General.* The meetings of this body are private and deliberative. The actual Ministers of the day are alone present, no records of the meetings transpire, and no official notice is taken of the proceedings. The members of the Cabinet, being the leaders of the party in power in Parliament, control the bent of legislation, and must retain the confidence of the people and also of the Governor-General (or Governor), to whom they act as an advising body. They also in effect wield, by virtue of their seats on the Executive Council, the whole executive force of the community. In summoning, proroguing, or dissolving Parliament, the Governor-General (or Governor) is usually guided by the advice tendered him by the Cabinet, though legally in no way bound to accept such advice.

(b) *Commonwealth Ministers of State.* The following statement gives the names of the Ministers of State for the Commonwealth who have held office since the inauguration of the Commonwealth Government :—

COMMONWEALTH MINISTERS OF STATE, 1st JANUARY, 1901, to MARCH, 1925.

HOME AND TERRITORIES. (Prior to 14/11/16 known as External Affairs.)			TRADE AND CUSTOMS.		
Name.	From—	To—	Name.	From—	To—
Rt. Hon. E. BARTON, P.C., K.C. (a) (b) ..	1/1/01	23/9/03	Rt. Hon. C. C. KINGSTON, P.C., K.C. ..	1/1/01	24/7/03
Hon. A. DEAKIN (a) ..	23/9/03	26/4/04	Hon. Sir W. J. LYNE, K.C.M.G. ..	7/8/03	26/4/04
Hon. W. M. HUGHES (k) ..	26/4/04	17/8/04	Hon. A. FISHER (h) ..	26/4/04	17/8/04
Rt. Hon. G. H. REID, P.C., K.C. (a) (g) ..	17/8/04	4/7/05	Hon. A. MCLEAN ..	17/8/04	4/7/05
Hon. A. DEAKIN (a) ..	4/7/05	12/11/08	Hon. Sir W. J. LYNE, K.C.M.G. ..	4/7/05	29/7/07
Hon. E. L. BATCHELOR ..	12/11/08	2/6/09	Hon. A. CHAPMAN (r) ..	29/7/07	12/11/08
Hon. L. E. GROOM (q) ..	2/6/09	29/4/10	Hon. F. G. TUDOR ..	12/11/08	2/6/09
Hon. E. L. BATCHELOR ..	29/4/10	f 8/10/11	Hon. Sir R. W. BEST, K.C.M.G. ..	2/6/09	29/4/10
Hon. J. THOMAS ..	14/10/11	24/6/13	Hon. F. G. TUDOR ..	29/4/10	24/6/13
Hon. P. McM. GLYNN, K.C. Hon. J. A. ARTHUR ..	24/6/13	17/9/14	Hon. L. E. GROOM (q) ..	24/6/13	17/9/14
Hon. J. A. ARTHUR ..	17/9/14	f 9/12/14	Hon. F. G. TUDOR ..	17/9/14	14/9/16
Hon. HUGH MAHON ..	14/12/14	14/11/16	Rt. Hon. W. M. HUGHES, P.C. (k) ..	29/9/16	14/11/16
Hon. F. W. BAMFORD ..	14/11/16	17/2/17	Hon. W. O. ARCHIBALD ..	14/11/16	17/2/17
Hon. P. McM. GLYNN, K.C. Hon. A. POYNTON ..	17/2/17	3/2/20	Hon. J. A. JENSEN ..	17/2/17	13/12/18
Rt. Hon. G. F. PEARCE, P.C. ..	4/2/20	21/12/21	Hon. W. A. WATT (n) ..	13/12/18	17/1/19
	21/12/21	(e)	Hon. W. M. GREENE ..	17/1/19	21/12/21
			Hon. A. S. RODGERS ..	21/12/21	9/2/23
			Hon. AUSTIN CHAPMAN ..	9/2/23	26/5/24
			Hon. H. E. PRATTEN ..	13/6/24	(e)
ATTORNEY-GENERAL.			TREASURER.		
Name.	From—	To—	Name.	From—	To—
Hon. A. DEAKIN ..	1/1/01	23/9/03	Rt. Hon. Sir G. TURNER, P.C., K.C.M.G. ..	1/1/01	26/4/04
Hon. J. G. DRAKE ..	23/9/03	26/4/04	Hon. J. C. WATSON (a) ..	26/4/04	17/8/04
Hon. H. B. HIGGINS, K.C. Hon. Sir J. H. SYMON, K.C.M.G., K.C. ..	26/4/04	17/8/04	Rt. Hon. Sir G. TURNER, P.C., K.C.M.G. ..	17/8/04	4/7/05
Hon. I. A. ISAACS ..	17/8/04	4/7/05	Rt. Hon. Sir J. FORREST, P.C., G.C.M.G. (l) ..	4/7/05	29/7/07
Hon. L. E. GROOM (q) ..	4/7/05	11/10/06	Hon. Sir W. J. LYNE, K.C.M.G. ..	29/7/07	12/11/08
Hon. W. M. HUGHES (k) ..	11/10/06	12/11/08	Hon. A. FISHER (a) (h) ..	12/11/08	2/6/09
Hon. P. McM. GLYNN ..	12/11/08	2/6/09	Rt. Hon. Sir J. FORREST, P.C., G.C.M.G. (l) ..	2/6/09	29/4/10
Hon. W. M. HUGHES (k) ..	2/6/09	29/4/10	Rt. Hon. A. FISHER, P.C. (a) Rt. Hon. Sir J. FORREST, P.C., G.C.M.G. (l) ..	29/4/10	24/6/13
Hon. W. H. IRVINE, K.C. (j) ..	29/4/10	24/6/13	Rt. Hon. A. FISHER, P.C. (a) Hon. W. G. HIGGS ..	24/6/13	17/9/14
Hon. W. M. HUGHES (a) (k) ..	24/6/13	17/9/14	Hon. A. POYNTON ..	17/9/14	27/10/15
Hon. L. E. GROOM (q) ..	17/9/14	21/12/21	Rt. Hon. Sir J. FORREST, P.C., G.C.M.G. (l) ..	27/10/15	27/10/16
	21/12/21	(e)	Hon. W. A. WATT (n) ..	24/11/16	17/2/17
			Rt. Hon. Sir JOSEPH COOK, P.C., G.C.M.G. (l) ..	17/2/17	27/3/18
			Hon. W. A. WATT (n) ..	27/3/18	15/6/20
			Rt. Hon. Sir JOSEPH COOK, P.C., G.C.M.G. (l) ..	28/7/20	21/12/21
			Hon. S. M. BRUCE, M.C. (p) ..	21/12/21	9/2/23
			Hon. E. C. G. PAGE ..	9/2/23	(e)
WORKS AND RAILWAYS. (Prior to 14/11/16 known as Home Affairs.)			DEFENCE.		
Name.	From—	To—	Name.	From—	To—
Hon. Sir W. J. LYNE, K.C.M.G. ..	1/1/01	7/8/03	Hon. Sir J. R. DICKSON, K.C.M.G. ..	1/1/01	f 10/1/01
Rt. Hon. Sir J. FORREST, P.C., G.C.M.G. (l) ..	7/8/03	26/4/04	Rt. Hon. Sir J. FORREST, P.C., G.C.M.G. (l) ..	17/1/01	7/8/03
Hon. E. L. BATCHELOR ..	26/4/04	17/8/04	Hon. J. G. DRAKE ..	7/8/03	23/9/03
Hon. D. THOMSON ..	17/8/04	4/7/05	Hon. A. CHAPMAN (r) ..	23/9/03	26/4/04
Hon. L. E. GROOM (q) ..	4/7/05	11/10/06	Hon. A. DAWSON ..	26/4/04	17/8/04
Hon. T. T. EWING (c) ..	11/10/06	23/1/07	Hon. J. W. MCCAY (m) ..	17/8/04	4/7/05
Hon. J. H. KEATING ..	23/1/07	12/11/08	Hon. T. PLAYFORD ..	4/7/05	23/1/07
Hon. H. MAHON ..	12/11/08	2/6/09	Hon. Sir T. T. EWING, K.C.M.G. ..	23/1/07	12/11/08
Hon. G. W. FULLER ..	2/6/09	29/4/10	Hon. G. F. PEARCE (o) ..	12/11/08	2/6/09
Hon. K. O'MALLEY ..	29/4/10	24/6/13	Hon. J. COOK (i) ..	2/6/09	29/4/10
Hon. JOSEPH COOK (a) (i) ..	24/6/13	17/9/14	Hon. G. F. PEARCE (o) ..	29/4/10	24/6/13
Hon. W. O. ARCHIBALD ..	17/9/14	27/10/15	Hon. E. D. MILLER ..	24/6/13	17/9/14
Hon. K. O'MALLEY ..	27/10/15	14/11/16	Hon. G. F. PEARCE (o) ..	17/9/14	21/12/21
Hon. P. J. LYNCH ..	14/11/16	17/2/17	Hon. W. M. GREENE ..	21/12/21	9/2/23
Hon. W. A. WATT (n) ..	17/2/17	27/3/18	Hon. E. K. BOWDEN ..	9/2/23	16/1/25
Hon. L. E. GROOM (q) ..	27/3/18	21/12/21	Hon. Sir N. R. HOWSE, V.C., K.C.B., K.C.M.G. ..	16/1/25	(e)
Hon. R. W. FOSTER ..	21/12/21	9/2/23			
Hon. P. G. STEWART ..	9/2/23	5/8/24			
Hon. W. C. HILL ..	26/9/24	(e)			

(a) Prime Minister. (b) Afterwards the Rt. Hon. Sir E. Barton, P.C., G.C.M.G., etc. (c) Afterwards the Hon. Sir T. T. Ewing, K.C.M.G. (d) Afterwards the Hon. Sir N. E. Lewis, K.C.M.G. (e) Still in office. (f) Died while holding office. (g) Afterwards the Rt. Hon. Sir G. H. Reid, P.C., G.C.M.G. (h) Afterwards the Rt. Hon. A. Fisher, P.C. (i) Afterwards the Rt. Hon. Sir J. Cook, P.C., G.C.M.G. (j) Afterwards the Hon. Sir W. H. Irvine, K.C.M.G., K.C. (k) Afterwards the Rt. Hon. W. M. Hughes, P.C., K.C. (l) Afterwards Lord Forrest of Bunbury. (m) Afterwards the Hon. Sir J. W. McCay, K.C.M.G. (n) Afterwards the Rt. Hon. W. A. Watt, P.C. (o) Afterwards the Rt. Hon. G. F. Pearce, P.C. (p) Afterwards the Rt. Hon. S. M. Bruce, P.C., M.C. (q) Afterwards the Hon. Sir Littleton E. Groom, K.C.M.G., K.C. (r) Afterwards the Hon. Sir A. Chapman, K.C.M.G.

COMMONWEALTH MINISTERS OF STATE, 1st JANUARY, 1901, TO
MARCH, 1925—continued.

POSTMASTER-GENERAL.			VICE-PRESIDENT OF THE EXECUTIVE COUNCIL.		
Name.	From—	To—	Name.	From—	To—
Rt. Hon. Sir JOHN FORREST, P.C., G.C.M.G. (l) ..	1/1/01	17/1/01	Hon. R. E. O'CONNOR, K.C. ..	1/1/01	23/9/03
Hon. J. G. DRAKE ..	5/2/01	7/8/03	Hon. T. PLAYFORD ..	23/9/03	26/4/04
Hon. Sir P. O. Fysh, K.C.M.G. ..	7/8/03	26/4/04	Hon. G. MCGREGOR ..	26/4/04	17/8/04
Hon. H. MAHON ..	26/4/04	17/8/04	Hon. J. G. DRAKE ..	17/8/04	4/7/05
Hon. S. SMITH ..	17/8/04	4/7/05	Hon. T. T. EWING (c) ..	4/7/05	11/10/06
Hon. A. CHAPMAN (r) ..	4/7/05	29/7/07	Hon. J. H. KEATING ..	11/10/06	19/2/07
Hon. S. MAUGER ..	29/7/07	12/11/08	Hon. Sir R. W. BEST, K.C.M.G. ..	19/2/07	12/11/08
Hon. J. THOMAS ..	12/11/08	2/6/09	Hon. G. MCGREGOR ..	12/11/08	2/6/09
Hon. Sir J. QUICK ..	2/6/09	29/4/10	Hon. E. D. MILLEN ..	2/6/09	29/4/10
Hon. J. THOMAS ..	29/4/10	14/10/11	Hon. G. MCGREGOR ..	29/4/10	24/6/13
Hon. C. E. FRAZER ..	14/10/11	24/6/13	Hon. J. H. MCCOLL ..	24/6/13	17/9/14
Hon. AGAR WYNNE ..	24/6/13	17/9/14	Hon. A. GARDINER ..	17/9/14	27/11/16
Hon. W. G. SPENCE ..	17/9/14	27/10/15	Hon. W. G. SPENCE ..	27/11/16	17/2/17
Hon. W. WEBSTER ..	27/10/15	3/2/20	Hon. E. D. MILLEN ..	17/2/17	16/11/17
Hon. G. H. WISE ..	4/2/20	21/12/21	Hon. L. E. GROOM (g) ..	16/11/17	27/3/18
Hon. A. POYNTON, O.B.E. ..	21/12/21	9/2/23	Hon. E. J. RUSSELL ..	27/3/18	21/12/21
Hon. W. G. GIBSON ..	9/2/23	(c)	Hon. JOHN EARLE ..	21/12/21	9/2/23
			Hon. L. ATKINSON ..	9/2/23	(c)
THE NAVY.			REPATRIATION.		
(Amalgamated with Defence before 1915, and after 21st December, 1921.)			Name.	From—	To—
			Hon. E. D. MILLEN ..	28/9/17	9/2/23
EXTERNAL AFFAIRS (revived December, 1921).			HEALTH.		
Name.	From—	To—	Name.	From—	To—
Hon. J. A. JENSEN ..	12/7/15	17/2/17	Hon. W. M. GREENE ..	10/3/21	9/2/23
Rt. Hon. J. COOK, P.C. (i) ..	17/2/17	28/7/20	Hon. A. CHAPMAN (r) ..	9/2/23	26/5/24
Hon. W. H. LAIRD SMITH ..	28/7/20	21/12/21	Hon. H. E. PRATTEN ..	13/6/24	16/1/25
			Hon. SIR N. R. HOWSE, V.C., K.C.B., K.C.M.G. ..	16/1/25	(c)
MARKETS AND IMMIGRATION.					
Name.	From—	To—	Name.	From—	To—
Rt. Hon. W. M. HUGHES, P.C., K.C. ..	21/12/21	9/2/23	Hon. R. V. WILSON ..	16/1/25	(c)
Hon. S. M. BRUCE, M.C. (a) (p)	9/2/23	(c)			

WITHOUT PORTFOLIO.

Name.	From—	To—	Name.	From—	To—
Hon. N. E. LEWIS (d) ..	1/1/01	23/4/01	Hon. J. A. JENSEN ..	17/9/14	12/7/15
Hon. Sir P. O. Fysh, K.C.M.G. ..	23/4/01	7/8/03	Hon. E. J. RUSSELL ..	17/9/14	27/3/18
Hon. J. H. KEATING ..	5/7/05	11/10/06	Hon. W. H. LAIRD SMITH ..	14/11/16	17/2/17
Hon. S. MAUGER ..	11/10/06	29/7/07	Hon. L. E. GROOM (g) ..	17/2/17	16/11/17
Hon. J. H. COOK ..	28/1/08	12/11/08	Hon. A. POYNTON ..	26/3/18	4/2/20
Hon. J. HUTCHISON ..	12/11/08	2/6/09	Hon. G. H. WISE ..	26/3/18	4/2/20
Hon. A. DEAKIN (a) ..	2/6/09	29/4/10	Hon. W. M. GREENE ..	26/3/18	17/1/19
Col. Hon. J. F. G. FORTON, C.M.G. ..	2/6/09	29/4/10	Hon. R. B. ORCHARD ..	26/3/18	31/1/19
Hon. E. FINDLEY ..	29/4/10	24/6/13	Hon. Sir G. de L. RYRIE, K.C.M.G., C.B., V.D. ..	4/2/20	9/2/23
Hon. C. E. FRAZER ..	29/4/10	14/10/11	Hon. W. H. LAIRD SMITH ..	4/2/20	23/7/20
Hon. E. A. ROBERTS ..	23/10/11	24/6/13	Hon. A. S. RODGERS ..	23/7/20	21/12/21
Hon. J. S. CLEMONS ..	24/6/13	17/9/14	Hon. H. LAMOND ..	21/12/21	9/2/23
Hon. W. H. KELLY ..	24/6/13	17/9/14	Hon. R. V. WILSON ..	9/2/23	16/1/25
Hon. H. MAHON ..	17/9/14	14/12/14	Hon. T. W. CRAWFORD ..	9/2/23	(c)
			Hon. C. W. C. MARR, D.S.O., M.C., V.D. ..	16/1/25	(c)

See notes on previous page.

(c) *State Ministries.* The names of the members of the Ministries in each State in March, 1925, are shown in the following statement:—

STATE MINISTRIES, 1925.

NEW SOUTH WALES.

Premier and Colonial Treasurer—

HON. SIR G. W. FULLER, K.C.M.G.

Vice-President of the Executive Council—

HON. SIR J. H. CARRUTHERS, K.C.M.G.,
LL.D., M.L.C.

Secretary for Lands and Minister for Forests—

HON. W. E. WEARNE.

Colonial Secretary and Minister for Public Health—

HON. C. W. OAKES, C.M.G.

Attorney-General—

HON. T. R. BAVIN, K.C.

Secretary for Public Works and Minister for Railways and State Industrial Enterprises—

HON. R. T. BALL.

Minister of Public Instruction—

HON. A. BRUNTNELL.

Secretary for Mines and Minister for Local Government—

HON. J. C. L. FITZPATRICK.

Minister of Justice—

HON. T. J. LEY.

Minister for Agriculture—

CAPTAIN THE HON. F. A. CHAFFEY.

Minister for Labour and Industry—

HON. E. H. FARRAR, M.L.C.

Honorary Minister—

HON. F. S. BOYCE, K.C., M.L.C.

VICTORIA.

Premier and Minister of Water Supply—

HON. J. ALLEN.

Treasurer and Minister of Public Instruction and of Labour—

HON. SIR A. J. PEACOCK, K.C.M.G.

Chief Secretary and Minister of Public Health—

HON. S. S. ARGYLE.

Commissioner of Crown Lands and Survey and Minister of Immigration—

HON. A. DOWNARD.

Attorney-General and Solicitor-General and Minister of Railways—

HON. F. W. EGGLESTON.

Commissioner of Public Works and Minister of Mines—

HON. G. L. GOUDIE, M.L.C.

Minister of Forests—

HON. H. F. RICHARDSON, M.L.C.

Minister of Agriculture and Minister of Markets—

COLONEL THE HON. M. W. J.

BOURCHIER, C.M.G., D.S.O., V.D.

Ministers without Portfolio—

HON. W. P. CROCKETT, M.L.C.

HON. M. MCGREGOR, M.L.C.

HON. J. McDONALD.

HON. E. J. MACKRELL.

QUEENSLAND.

Premier, Vice-President of the Executive Council, Chief Secretary, and Treasurer—

HON. W. N. GILLIES.

Secretary for Agriculture and Stock—

HON. W. FORGAN-SMITH.

Secretary for Mines—

HON. A. J. JONES.

Secretary for Railways—

HON. J. LARCOMBE.

Attorney-General—

HON. J. MULLAN.

Secretary for Public Instruction—

HON. T. WILSON.

Home Secretary—

HON. J. STOPFORD.

Secretary for Public Lands—

HON. W. MCCORMACK.

Secretary for Public Works—

HON. M. J. KIRWAN.

Assistant Minister of Works and Minister in Charge of State Enterprises—

HON. A. DUNSTAN.

SOUTH AUSTRALIA.

*Premier, Treasurer, Minister of Irrigation,
and of Repatriation—*

HON. J. GUNN.

Chief Secretary and Minister of Railways—

HON. J. JELLEY, M.L.C.

Attorney-General and Minister of Housing—

HON. W. J. DENNY.

*Commissioner of Crown Lands and Minister
of Agriculture—*

HON. T. BUTTERFIELD.

*Minister of Mines and of Marine and of
Immigration and of Local Government—*

HON. A. A. KIRKPATRICK.

*Commissioner of Public Works, Minister
of Education and of Industry—*

HON. L. L. HILL.

WESTERN AUSTRALIA.

*Premier, Colonial Treasurer, and Minister
for Forests—*

HON. P. COLLIER.

*Minister for Lands, Immigration, and
Industry—*

HON. W. C. ANGWIN.

*Chief Secretary and Minister for Education,
Health, and North-West—*

HON. J. M. DREW, M.L.C.

*Minister for Public Works, Water Supply,
Labour, and Trading Concerns—*

HON. A. MCCALLUM.

Minister for Mines, and Agriculture—

HON. M. F. TROY.

Minister for Railways, Justice, and Police—

HON. J. C. WILLCOCK.

Ministers without Portfolio—

HON. S. W. MUNSIE.

HON. J. CUNNINGHAM.

HON. J. W. HICKEY, M.L.C.

TASMANIA.

*Premier and Treasurer and Minister for
Railways—*

HON. J. A. LYONS.

*Attorney-General and Minister for Educa-
tion—*

HON. A. E. OGILVIE.

Chief Secretary and Minister for Mines—

HON. J. A. GUY.

*Minister for Lands, Works, Agriculture,
and Forestry—*

HON. J. A. BELTON.

Minister without Portfolio—

HON. A. LAWSON, M.L.C.

5. Number and Salary of Members of the Legislatures.—The following table shows the number of members in each of the legislative chambers in March, 1925 :—

MEMBERS OF COMMONWEALTH AND STATE PARLIAMENTS, AND ANNUAL SALARIES, 1925.

Members in—	C'wealth.	N.S.W.	Vict.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
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MEMBERS.

Upper House ..	36	82	34	(a)	20	30	18	220
Lower House ..	76	90	65	72	46	50	30	429
Total ..	112	172	99	72	66	80	48	649

ANNUAL SALARY.

	£	£	£	£	£	£	£	
Upper House ..	1,000	..	200	(a)	400	400	300	..
Lower House ..	1,000	600	500	500	400	400	300	..

(a) Council abolished, 1922.

The use of the expressions "Upper House" and "Lower House" in the above statement, though not justified constitutionally, is convenient, inasmuch as the legislative chambers are known by different names in the Commonwealth and in some of the States.

6. Enactments of the Parliament.—In the Commonwealth, all laws are enacted in the name of the Sovereign, the Senate, and the House of Representatives. The subjects with respect to which the Commonwealth Parliament is empowered to make laws are enumerated in the Constitution Act (see Chapter I.). In the States, laws are enacted in the name of the Sovereign by and with the consent of the Legislative Council (except in Queensland) and Legislative Assembly or House of Assembly. The Governor-General or the State Governor acts as Viceroy as regards giving the Royal assent to or vetoing Bills passed by the Legislatures, or reserving them for the special consideration of the Sovereign. In the States, the Councils and Assemblies are empowered generally, subject to the Commonwealth Constitution, to make laws in and for their respective States, in all cases whatsoever. Subject to certain limitations, they may alter, repeal, or vary their Constitution. Where a law of a State is inconsistent with a law of the Commonwealth the latter prevails, and the former is, to the extent of the inconsistency, invalid.

§ 2. Parliaments and Elections.

1. Qualifications for Membership and for Franchise.—The conspectus in § 4 of "General Government" in Year Book No. 13 contains particulars, as in 1920, relating to the legislative chambers in the Commonwealth and State Parliaments, and shows concisely the qualifications necessary for membership and for the franchise in each House. (These are, in the main, applicable in 1925, but it must be remembered that Queensland abolished the Upper House in 1922.) Disqualification of persons otherwise eligible, either as members or voters, is generally on the usual grounds of being of unsound mind or attainted of treason, being convicted of certain offences, and, as regards membership, on the grounds of holding a place of profit under the Crown, being pecuniarily interested in a Government contract, or being an undischarged bankrupt.

2. The Federal Parliament.—The Senate consists of 36 members, six being returned by each of the original federating States. Members of this Chamber are elected for a term of six years, but by a provision in the Constitution half the members retire at the end of every third year, although they are eligible for re-election. In accordance with the Constitution, the total number of members of the House of Representatives must be as nearly as possible double that of the Senate. In the House of Representatives the States are represented on a population basis, and the numbers stand at present as follows:—New South Wales, 28; Victoria, 20; Queensland, 10; South Australia, 7; Western Australia, 5; Tasmania, 5; Northern Territory, 1—total, 76. The Constitution provides for a minimum of five members for each original State. Members of the House of Representatives are elected for the duration of the Parliament, which is limited to three years. In elections for Senators, each State is counted as a single electorate, but an elaborate scheme of subdivision had to be undertaken in order to provide workable electorates in each State for members of the House of Representatives. Members of both Houses are paid at the rate of £1,000 per annum. Further information regarding the Senate and the House of Representatives is given in Chapter I.

3. Federal Elections.—There have been eight complete Parliaments since the inauguration of Federation. The fifth Parliament, which was opened on the 9th July, 1913, was dissolved on the 30th July, 1914, in somewhat unusual circumstances. Under Section 27 of the Constitution, it is provided that, should the Senate fail to pass, or pass with amendments, any proposed law previously passed by the House of Representatives, and should the latter House, after a specified interval, again pass the proposed law, with or without the amendments of the Senate, and the Senate for a second time reject it or pass it with amendments to which the lower House will not agree, then the Governor-General may dissolve the two Houses simultaneously. For the first time in the history of the Commonwealth this deadlock between the Senate and the House of Representatives occurred in the second session of the fifth Parliament, and, in accordance with the section

of the Constitution referred to above, both Houses were dissolved by the Governor-General. The first session of the ninth Parliament opened on the 28th February, 1923. Particulars regarding the last five Commonwealth elections may be found in the table given hereunder :—

FEDERAL ELECTIONS, 1913 to 1922.

Date.	Electors Enrolled.			Electors who Voted.			Percentage of Electors who Voted.		
	Males.	Fem.	Total.	Males.	Fem.	Total.	Males.	Fem.	Total.
THE SENATE.									
31st May, 1913 ..	1,453,949	1,306,267	2,760,216	1,122,677	910,574	2,033,251	77.22	69.71	73.66
5th September, 1914 ..	1,478,468	1,333,047	2,811,515	1,139,933	902,403	2,042,336	77.10	67.69	72.64
5th May, 1917 ..	1,444,133	1,391,194	2,835,327	1,184,663	1,018,138	2,202,801	82.03	73.18	77.69
13th December, 1919 ..	1,439,818	1,410,044	2,849,862	1,094,534	938,403	2,032,937	76.02	65.55	71.33
16th December, 1922 ..	1,494,508	1,487,916	2,982,424	966,551	761,695	1,728,246	64.67	51.19	57.95

THE HOUSE OF REPRESENTATIVES.

31st May, 1913 ..	1,401,042	1,280,335	2,681,377	1,078,997	876,728	1,955,723	77.01	69.55	73.49
5th September, 1914 ..	1,225,990	1,122,451	2,348,441	954,768	772,138	1,726,906	77.88	68.79	73.53
5th May, 1917 ..	1,262,527	1,207,938	2,470,465	1,041,552	892,926	1,934,478	82.50	73.92	78.30
13th December, 1919 ..	1,395,165	1,367,468	2,762,633	1,063,029	914,816	1,977,845	76.19	66.90	71.59
16th December, 1922 ..	1,396,020	1,378,254	2,774,274	920,177	726,686	1,646,863	65.91	52.72	59.36

The percentage of electors who exercised the franchise at each election rose from 53.04 for the Senate and 55.69 for the House of Representatives in 1901 to the maximum of 77.69 and 78.30 respectively in 1917. The next election in 1919 showed a considerable falling off, and in 1922 the decrease was still more marked, the respective percentages for that year being 57.95 and 59.36, or very little more than those for 1901.

4. Federal Referenda.—(i) *Introductory.* According to section 128 of the Act, any proposed law for the alteration of the Constitution must, in addition to being passed by an absolute majority of each House of Parliament, be submitted to a referendum of the electors in each State, and must further be approved by a majority of the States and of the electors who voted. Several referenda have been held from time to time, but in two cases only has any proposed law been assented to by the required majority of the electors.

(ii) *Senate Elections Referendum, 1906.* A referendum was held on the 12th December, 1906, at which the question of altering from January to July the date at which the term of service of a senator begins, and other details connected with the election of senators, were submitted for decision by the electors. The number who voted in favour of the amendment was 774,011 and of those not in favour 162,470; the amendment was therefore carried. Only 50.17 per cent. of the electors voted.

(iii) *Finance and State Debts Referendum.* Simultaneously with the general election of the 13th April, 1910, the electors were asked to decide regarding the alteration of the Constitution on two points, viz. :—(a) an alteration of the financial arrangements between the Commonwealth and the States, and (b) giving the Commonwealth power to take over the debts of the States, whenever incurred. The former proposal was rejected, 645,514 electors having voted in favour, and 670,838 not in favour, while the latter proposal was accepted by 715,053 votes to 586,271 votes. Of the voters on the roll, 62.16 per cent. voted.

(iv) *Legislative Powers Referendum, 1910.* The object of the proposed law submitted to this referendum was to give the Commonwealth Parliament power to deal with the following matters :—(a) Trade and Commerce, without any limitations, instead of " Trade

and Commerce with other countries, and among the States" only. (b) The control and regulation of corporations of all kinds (except those formed not for the acquisition of gain). At present only "Foreign corporations and trading and financial corporations formed within the limits of the Commonwealth" come under the jurisdiction of the Federal Parliament. (c) Labour and employment, including wages and conditions of labour and the settlement of industrial disputes generally, including disputes in relation to employment on State railways. (Conciliation and arbitration by the Commonwealth operate only in the case of any industrial dispute extending beyond the limits of any one State), and (d) Combinations and monopolies in relation to the production, manufacture, or supply of goods or services.

The referendum was held on the 26th April, 1911, and the number of votes cast in favour of the proposed law was 483,356, and against it 742,704, the majority against being 259,348. The percentage of electors who cast effective votes was 52.36, and the proposal was rejected in every State except Western Australia.

(v) *Monopolies Referendum, 1910.* It was proposed to insert in the Constitution the following sub-section:—"When each House of Parliament, in the same session, has by resolution declared that the industry or business of producing, manufacturing, or supplying goods, or of supplying any specified services, is the subject of any monopoly, the Parliament shall have power to make laws for carrying on the industry or business by or under the control of the Commonwealth, and acquiring for that purpose on just terms any property used in connexion with the industry or business." The voting on this question was held simultaneously with that on the preceding proposal, and the proposed law was rejected, 488,668 voters casting their votes in favour, and 736,392 against, the majority against being 248,264. Of the electors on the roll, 52.34 per cent. voted effectively, and the only State which voted in favour of the law was Western Australia.

(vi) *Legislative Powers and Monopolies Referendum, 1913.* On the 31st May, 1913, the same proposed alterations were again submitted to the people as five distinct laws, with an additional one whereby the conditions of employment and the settlement of disputes relating thereto in the several State railway services might be brought within the jurisdiction of the Commonwealth. All six proposed laws were rejected. The following table shows the numbers of votes cast for and against each proposed law:—

COMMONWEALTH REFERENDA, 1913.—RESULTS OF VOTING.

Nature of Proposal.	Votes in Favour.	Votes Not in Favour
Trade and Commerce	958,419	982,615
Corporations	960,711	986,824
Industrial Matters	961,601	987,611
Railway Disputes	956,358	990,046
Trusts	967,331	975,943
Nationalization of Monopolies	917,165	941,947

The percentage of electors who voted was nearly 74, and the States of Queensland, South Australia and Western Australia were in favour of the proposals, while the other three States were not in favour.

(vii) *Military Service Referendum, 1916.* A referendum was held on the 28th October, 1916, when the following question with regard to military service was submitted to the people:—"Are you in favour of the Government having, in this grave emergency, the same compulsory powers over citizens in regard to requiring their military service, for the term of this War, outside the Commonwealth, as it now has in regard to military service within the Commonwealth?" In New South Wales, Queensland and South Australia the majority of the voters was not in favour, while in the other States the proposal was carried. The number of votes cast in favour was 1,087,557, and those cast not in favour was 1,160,033, the net result being a majority of 72,476 votes not in favour. Of the electors on the roll, 82.75 per cent. voted.

(viii) *Military Service Referendum, 1917.* A further referendum was held on the 20th December, 1917, the question being, "Are you in favour of the proposal of the Commonwealth Government for reinforcing the Australian Imperial Force oversea?" The proposal was that, while voluntary enlistment was to continue, compulsory reinforcements should be called up by ballot to make the total reinforcements up to 7,000 per month. In New South Wales, Victoria, Queensland and South Australia the majority of voters was not in favour of the prescribed question. The number of votes cast in favour was 1,015,159 and of those not in favour 1,181,747, the net result being a majority of 166,588 votes not in favour. The percentage of electors who voted was 81.34.

(ix) *Legislative Powers and Nationalization of Monopolies Referendum, 1919.* On the 19th December, 1919, proposals were submitted to a referendum of the electors for the alteration of the Constitution in relation to the extension of the legislative powers of the Commonwealth in regard to industrial disputes and to the nationalization of monopolies. In each case the majority of votes was not in favour of the proposed alteration. For the increase of legislative powers, 911,357 votes were cast in favour, and 924,160 against, and for the nationalization of monopolies, the number of votes in favour was 813,880 and not in favour 859,451, consequently both proposals were rejected, the former by 12,803 votes and the latter by 45,571 votes. The percentage of electors who voted on the former question was 64.41 and on the latter 58.72, although ballot-papers were issued to 71.33 of the voters enrolled. The States voting in favour of both proposals were Victoria, Queensland and Western Australia.

5. **The Parliament of New South Wales.**—(i) *Constitution.* The Legislative Council in this State is a nominee chamber, the Legislative Assembly being an elective body. Theoretically the Legislative Council may contain an unlimited number of members, and the number of members at the latest available date was eighty-two: The tenure of the seat is for life; four-fifths of the members must be persons not holding any paid office under the Crown, but this is held not to include officers of His Majesty's sea or land forces on full or half-pay, or retired officers on pensions. The Legislative Assembly consists of ninety members, who hold their seats during the existence of the Parliament to which they are elected. Nine electorates return five members each, and fifteen return three members each. The duration of Parliament is limited to three years.

(ii) *Particulars of Elections.* Since the introduction of responsible government in New South Wales there have been twenty-five complete Parliaments, the first of which opened on the 22nd May, 1856, and was dissolved on the 19th December, 1857, while the twenty-sixth opened on the 26th April, 1922. The last mentioned Parliament was elected on the 25th March, 1922, under the proportional representation system. Particulars of voting at elections from 1910 to 1922 are given below:—

LEGISLATIVE ASSEMBLY ELECTIONS, NEW SOUTH WALES, 1910 to 1922.

Year.	Electors Qualified to Vote.			Electors who Voted.			Percentage of Electors who Voted in Contested Electorates.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
1910	458,626	409,069	867,695	322,199	262,154	584,353	72.53	65.52	69.20
1913	553,633	484,366	1,037,999	385,838	302,389	688,227	72.20	64.55	68.63
1917	574,308	535,522	1,109,830	328,030	295,354	623,384	62.40	60.57	61.52
1920	593,244	561,193	1,154,437	363,115	285,594	648,709	61.21	50.89	56.19
1922	636,662	614,361	1,251,023	466,949	408,515	875,464	73.34	66.49	69.98

The franchise was extended to women (Women's Franchise Act) in 1902, and was exercised for the first time at a State election in 1904.

6. **The Parliament of Victoria.**—(i) *Constitution.* Both of the Victorian legislative chambers are elective bodies, but there is a considerable difference in the number of members of each House, as well as in the qualifications necessary for members and electors. The number of members in the Upper House in March, 1925, was 34, and in the Lower House, 65. In the Legislative Council the tenure of the seat is for six years, but one member for each province retires every third year, except in the case of a dissolution, when one-half of the newly elected members hold their seats for three years only. Members of the Legislative Assembly are elected for the duration of Parliament, which is limited to three years. An elector for the Legislative Assembly may vote only once, plurality of voting having been abolished in 1899; an elector, however, qualified in more than one district, may select that for which he desires to record his vote. A preferential system of voting (see Year Book No. 6, page 1182) was for the first time adopted in Victoria at the election held in November, 1911.

(ii) *Particulars of Elections.* Since the introduction of responsible government in Victoria there have been twenty-seven complete Parliaments, the first of which opened on the 21st November, 1856, and closed on the 9th August, 1859, while the twenty-seventh was dissolved on the 28th May, 1924. The first session of the twenty-eighth Parliament was opened on the 8th July, 1924, and closed on the 19th December, 1924. Particulars of voting at recent elections are given in the subjoined table:—

VICTORIAN ELECTIONS, 1910 TO 1924.

LEGISLATIVE COUNCIL (LAST ELECTION 1922.)

Year.	Electors Enrolled.	Electors Enrolled in Contested Electorates.	Electors who Voted.	Percentage of Electors who Voted in Contested Electorates.
1910	240,520	136,479	48,053	35.21
1913	270,175	99,646	47,666	47.89
1916	300,321	92,421	34,853	37.71
1919	317,593	133,058	40,393	30.35
1922	353,440	161,731	47,008	29.07

LEGISLATIVE ASSEMBLY.

Year.	Electors Enrolled.			Electors who Voted.			Percentage of Electors who Voted in Contested Electorates.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
1914	398,234	411,792	810,026	166,502	153,448	319,950	57.55	50.46	53.92
1917	397,585	430,645	828,230	172,317	184,682	356,999	54.30	54.12	54.21
1920	418,085	450,763	868,848	232,604	235,621	468,225	66.23	61.38	63.70
1921	414,818	456,638	871,456	167,812	158,415	326,227	61.29	53.53	57.26
1924	433,357	467,070	900,427	190,153	180,810	370,963	63.02	55.72	59.24

The franchise was extended to women by the Adult Suffrage Act 1908.

7. **The Parliament of Queensland.**—(i) *Constitution.* As pointed out previously, the Legislative Council in Queensland was abolished in 1922, the date of Royal assent to the Act being the 23rd March. The Legislative Assembly is composed of seventy-two members, and the State is divided into that number of electoral districts. A modified system of optional preferential voting is in operation in Queensland. (See Year Book No. 6, page 1183.)

(ii) *Particulars of Elections.* Since the establishment of responsible government in Queensland there have been twenty-two complete Parliaments, the first of which opened on the 29th May, 1860, and dissolved on the 20th May, 1863, while the twenty-second:

Parliament opened on the 15th November, 1920, and closed on the 13th April, 1923. At the elections held in May, 1915, the principle of compulsory voting was introduced for the first time in Australia. Of the total number of electors enrolled at the 1923 elections, 82.23 per cent. went to the polls. Statistics regarding the last five elections for which details are available are given below.

QUEENSLAND LEGISLATIVE ASSEMBLY ELECTIONS, 1912 TO 1923.

Year.	Electors Enrolled.			Electors who Voted.			Percentage of Electors who Voted in Contested Electorates.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
1912	173,801	135,789	309,590	122,844	95,795	218,639	75.92	75.02	75.52
1915	184,627	150,568	335,195	140,396	125,844	266,240	86.46	90.09	88.14
1918	233,342	191,074	424,416	176,768	163,901	340,669	75.75	85.78	80.27
1920	238,750	206,931	445,681	187,575	168,651	356,226	78.57	81.50	79.93
1923	257,001	219,476	476,477	194,287	174,980	369,267	80.72	83.96	82.23

The election of 1907 was the first State election in Queensland at which women voted, the privilege being conferred under the Elections Acts Amendment Act 1905.

8. The Parliament of South Australia.—(i) *Constitution.* In this State there is a Legislative Council composed of twenty members and a House of Assembly with forty-six members, both chambers being elective. The State is divided into five districts, which return four members each to the Legislative Council. For the House of Assembly, eight districts return three members each, and eleven districts two members each.

(ii) *Particulars of Elections.* Since the inauguration of responsible government in South Australia there have been twenty-three complete Parliaments, the first of which was opened on the 22nd April, 1857. The first session of the twenty-fifth Parliament began on the 24th July, 1924. Particulars of voting at the last five elections are given below :—

SOUTH AUSTRALIAN ELECTIONS, 1912 to 1924.

Year.	Electors Enrolled.			Electors who Voted.			Percentage of Electors who voted in Contested Electorates.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.

LEGISLATIVE COUNCIL.

1912..	59,228	19,985	79,213	40,709	13,016	53,725	80.91	72.56	78.71
1915..	66,614	21,635	88,249	11,436	4,808	16,244	75.69	71.25	74.32
1918..	71,510	23,461	94,971	42,987	11,800	54,787	60.11	50.30	57.69
1921..	69,986	23,062	93,048	38,597	11,309	49,906	64.23	53.96	61.57
1924..	67,429	22,018	89,447	36,626	10,492	47,118	65.79	54.94	63.02

HOUSE OF ASSEMBLY.

1912..	117,440	106,971	224,411	87,530	73,732	161,262	74.53	68.93	71.86
1915..	128,594	124,797	253,391	70,898	65,157	136,055	77.22	72.64	74.95
1918..	126,669	132,043	258,712	71,501	62,742	134,243	56.45	47.52	51.89
1921..	134,091	137,931	272,022	91,451	77,600	169,051	70.10	57.64	63.77
1924..	141,944	147,899	289,843	87,712	73,453	161,165	69.65	56.05	62.71

It is interesting to note that South Australia was the first of the States to grant women's suffrage (under the Constitution Amendment Act 1894), the franchise being exercised for the first time at the Legislative Assembly election on the 25th April, 1896.

9. The Parliament of Western Australia.—(i) *Constitution.* In this State both Chambers are elective. For the Legislative Council there are thirty members, each of the ten Provinces returning three members, while the Legislative Assembly is composed of fifty members, one member being returned by each of the fifty electoral districts. At the expiration of two years from the date of election to a seat in the Legislative Council, and every two years thereafter, the junior member for the time being for each province retires. Seniority is determined (a) by date of election, (b) if two or more members are elected on the same day, then the junior is the one who polled the least number of votes, (c) if the election be uncontested, or in case of an equality of votes, then the seniority is determined by the alphabetical precedence of surnames and, if necessary, Christian names. Members of the Legislative Assembly are elected for three years.

(ii) *Particulars of Elections.* Since the establishment of responsible government in Western Australia there have been ten complete Parliaments, the first of which was opened on the 30th December, 1890, while the twelfth Parliament was elected on 22nd March, 1924. The preferential system of voting in use in Western Australia is described in Year Book No. 6, page 1184. Particulars relating to the latest five Assembly and Council elections respectively are given in the tables below :—

WESTERN AUSTRALIAN ELECTIONS, 1911 to 1924.

Year.	Electors Enrolled.			Electors who Voted.			Percentage of Electors who Voted in Contested Electorates.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.

LEGISLATIVE COUNCIL.

1916	45,325	13,683	59,008	10,672	2,464	13,136	53.49	50.52	52.91
1918	46,272	14,700	60,972	14,043	3,930	17,973	39.04	31.83	37.20
1920	37,137	14,900	52,037	12,450	3,406	15,856	45.07	28.28	40.27
1922	40,360	14,838	55,198	17,524	4,763	22,287	46.16	33.81	42.82
1924	43,897	14,904	58,801	16,552	4,569	21,121	47.06	39.25	45.12

LEGISLATIVE ASSEMBLY.

1911	91,814	60,831	152,645	53,355	38,281	91,636	74.44	75.50	74.88
1914	126,598	88,143	214,741	54,612	41,993	96,605	56.59	58.29	57.32
1917	93,106	73,845	166,951	45,453	40,167	85,620	59.46	65.51	62.15
1921	89,523	75,165	164,688	54,747	44,211	98,958	69.16	65.22	67.34
1924	101,717	88,152	189,869	55,591	43,800	99,391	66.00	59.00	62.32

Women's suffrage was granted by the Electoral Act of 1899. At the 1921 elections the first woman member elected to an Australian Parliament was returned.

10. *The Parliament of Tasmania.*—(i) *Constitution.* In Tasmania there are two legislative chambers—the Legislative Council and the House of Assembly, both bodies being elective. The Council consists of eighteen members, returned from fifteen districts, Hobart returning three, Launceston two, and the remaining thirteen districts sending one member each. There are five House of Assembly districts corresponding to the Commonwealth electoral districts, each returning six members, who are elected under a system of proportional representation which first came into force at the 1909 elections. (See Year Book No. 6, page 1185.)

(ii) *Particulars of Elections.* The first Tasmanian Parliament opened on 2nd December, 1856, and closed on 8th May, 1861. There have been twenty complete Parliaments since the inauguration of responsible government. Particulars of the voting at the last five elections for the House of Assembly are given hereunder :—

TASMANIAN ELECTIONS, HOUSE OF ASSEMBLY, 1912 to 1922.

Year.	Electors Enrolled.			Electors who Voted.			Percentage of Electors who Voted in Contested Electorates.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
1912	52,853	50,660	103,513	40,713	35,337	76,050	77.03	69.73	73.47
1913	53,372	51,920	105,292	38,700	32,102	70,802	72.51	61.83	67.24
1916	54,466	52,855	107,321	41,427	37,557	78,984	76.06	71.05	73.60
1919	53,205	54,336	107,541	37,037	34,027	71,064	69.61	62.62	66.08
1922	54,958	55,591	110,549	38,457	31,295	69,752	69.96	56.30	63.09

The present members of the Legislative Council have been elected at various dates, and the following particulars are given of the last contested election in each case : number of electors on the roll, 37,612 ; number of votes recorded, male 14,723, female 3,863, total 18,586 ; percentage of persons who voted to the number on the roll, 49.41.

The suffrage was granted to women under the Constitution Amendment Act 1903.

§ 3. Cost of Parliamentary Government.

1. *General.*—The following statement shows the cost of parliamentary government in the Commonwealth and in each State, as well as the cost per head of population, for the year ended the 30th June, 1924. In order to avoid any incorrect conclusions as to the cost of the Governor General's or Governor's establishment, it may be pointed out that a very large part of the expenditure (with the exception of the item "Governor's salary") under the head of Governor-General or Governor represents official services entirely outside the Governor's personal interests, and carried out at the request of the Government.

COST OF PARLIAMENTARY GOVERNMENT, 1923-24.

Particulars.	C'with.	N.S.W.	Vic.	Q'land	S.A.	W.A.	Tas.	Total.
	£	£	£	£	£	£	£	£
1. Governor-General or Governor—								
Governor's salary ..	10,000	5,000	5,000	3,000	5,000	4,614	1,375	33,989
Official Secretary's salary ..	650	682	..	..	..	350	..	1,682
Governor's establishment ..	5,500	678	..	1,262	..	2,356	493	..
Repairs and maintenance of Governor's residences ..	10,971	2,563	7,077	2,023	1,942	1,029	..	42,390
Miscellaneous ..	724	1,487	(h)711	(k)2,775	185	..	614	..
Total ..	27,845	10,410	12,788	(k)9,060	7,127	8,349	2,482	78,061
2. Executive Council—								
Salaries of Officers ..	(a)	481	759	30	..	97	..	1,367
Other expenses ..	(a)	186	58	72	..	5	..	321
Total ..	(a)	667	817	102	..	102	..	1,688
3. Ministry—								
Salaries of Ministers ..	13,568	21,065	10,000	8,835	7,736	6,122	3,000	70,926
Other expenses ..	1,785	893	(h)	..	(f)	7,077	918	10,673
Total ..	15,353	22,558	10,000	8,835	7,736	13,199	3,918	81,599
4. Parliament—								
A. The Upper House:								
Allowances to members ..	35,312	..	5,988	..	6,097	12,160	4,800	64,357
Railway passes ..	b 20,200	16,065	(g)	..	1,260	m 2,184	750	40,459
Other expenses of members ..	..	..	..	..	179	150	33	362
B. The Lower House:								
Allowances to members ..	74,359	47,062	26,393	30,956	14,796	20,045	8,488	222,099
Railway passes ..	(c)	17,312	(g)5,000	(i)	2,898	(m)	1,616	26,826
Other expenses of members ..	..	2,650	..	2,467	599	300	39	6,055
C. Miscellaneous:								
Salaries of officers and staff ..	24,968	f26,166	17,969	6,970	6,331	3,732	4,289	90,425
Printing ..	10,943	8,852	3,545	3,427	6,295	4,669	3,325	..
Hansard (including printing) ..	16,168	8,383	9,907	7,119	6,181	..	..	..
Library ..	6,689	1,708	1,100	632	1,009	489	..	..
Refreshment rooms ..	1,956	(e)	2,438	1,500	1,899	1,784	..	..
Water, power, light, and heat ..	1,067	850	754	562	971	..	..	..
Postage, stores, and stationery ..	(d)3,291	1,392	753	336	100	1,677	..	..
Miscellaneous ..	8,268	3,119	353	1,802	2,064	..	..	..
Total ..	212,221	133,559	74,200	55,771	50,679	47,100	24,469	508,089
5. Electoral Office—								
Salaries of officers and staff ..	69,490	1,979	1,300	2,907	3,152	4,147	3,258	157,180
Other expenses ..	31,209	14,157	14,145	9,320	385	1,731	..	..
Total ..	100,699	16,136	15,445	12,227	3,537	5,878	3,258	157,180
6. Cost of Elections ..	..	..	11,319	..	9,930	5,036	..	26,285
7. Royal Commissions and Select Committees ..	11,361	4,017	3,574	3,106	4,022	2,656	1,502	30,238
GRAND TOTAL ..	367,479	187,347	128,143	89,101	83,031	82,410	35,629	973,140
Cost per head of population ..	1s. 3d.	1s. 8d.	1s. 7d.	2s. 2d.	3s. 2d.	4s. 8d.	3s. 3d.	3s. 5d.

(a) Included under Governor-General. (b) Including Lower House. (c) Included in Upper House. (d) Stores and stationery included in Miscellaneous. (e) Included in Miscellaneous. (f) Including Parliamentary Works Committee (both Houses). (g) £5,000 is paid to the Railway Department to cover issue of passes to State Governor and Staff, members of Parliament of Victoria and other States, and Executive Councillors. (h) See note (g). Ministers are allowed £1 per day when travelling. (i) Not available. Each member has a pass for the whole of the State Railways. (k) Includes £950 allowance to Lieutenant-Governor. (l) Ministers are allowed 15s. per day when travelling within the State, and £2 2s. per day outside the State. (m) £2,184 was paid for railway passes, etc., for members of both Houses; in addition to which members of each House have a pass over the whole of the State railways.

Figures showing total cost and cost per head during each of the last ten years are given in the next table.

COST OF PARLIAMENTARY GOVERNMENT 1914-15 TO 1923-24.

Year.	C'with.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Total.
TOTAL.								
	£	£	£	£	£	£	£	£
1914-15 ..	369,379	165,359	95,736	77,348	59,744	66,299	26,387	860,252
1915-16 ..	290,250	198,029	90,895	67,785	54,596	64,890	30,035	796,480
1916-17 ..	375,948	191,332	90,843	84,190	55,163	70,451	28,341	896,268
1917-18 ..	270,568	161,978	94,858	97,911	55,163	68,542	27,889	776,909
1918-19 ..	287,001	148,029	91,717	89,626	52,496	56,554	30,319	755,742
1919-20 ..	398,926	236,094	91,701	94,240	60,535	65,058	36,065	982,619
1920-21 ..	386,636	200,367	115,066	115,421	68,935	84,126	36,433	1,006,984
1921-22 ..	406,041	321,372	113,149	99,008	67,743	80,808	36,694	1,124,815
1922-23 ..	479,658	198,737	109,137	109,020	72,417	75,360	37,084	1,081,413
1923-24 ..	367,479	187,347	128,143	89,101	83,031	82,410	35,629	973,140

PER HEAD OF POPULATION.								
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
1914-15 ..	1 6	1 9	1 4	2 3	2 8	4 1	2 7	3 6
1915-16 ..	1 2	2 1	1 3	2 0	2 6	4 1	3 0	3 3
1916-17 ..	1 6	2 0	1 3	2 6	2 7	4 7	2 10	3 8
1917-18 ..	1 1	1 8	1 4	2 11	2 7	4 5	2 9	3 1
1918-19 ..	1 2	1 6	1 3	2 7	2 4	3 7	2 11	3 0
1919-20 ..	1 6	2 3	1 2	2 6	2 6	3 10	3 3	3 8
1920-21 ..	1 5	2 0	1 6	3 0	2 9	5 0	3 5	3 8
1921-22 ..	1 6	3 0	1 5	2 7	2 8	4 10	3 4	4 1
1922-23 ..	1 8	1 10	1 5	2 9	2 10	4 5	3 4	3 11
1923-24 ..	1 3	1 8	1 7	2 2	3 2	4 8	3 3	3 5

§ 4. Commonwealth Government Departments.

A statement showing the various matters dealt with and the Acts administered by the Minister of each of the Commonwealth Departments is given in Official Year Book No. 17, pp. 97 to 160.

§ 5. Strength of the Civil Service.

The strength of the permanent Civil Service at a definite point of time is not available, as the date to which annual records are made up vary in different State Departments. Activities under Government also vary. The following table excludes temporary (except railways and Government tramways) and part-time officers (registrars of births and deaths, postal contractors, &c.); naval, air, and military employees; and certain others, such as those employed in State trading undertakings:—

CIVIL SERVICE—NUMBER OF PERMANENT OFFICERS 1923-24.

	C'with.		N.S.W.		Victoria.		Queensland.		South Australia.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
(a) Railways and Tramways	(b) 1,044		52,864		33,288		21,409		10,646	
Police .. ..	..	..	2,821	4	1,247	4	1,114	..	590	9
Teachers .. ..	..	..	4,160	5,719	2,601	4,585	1,695	2,359	936	1,698
Other Departments	22,137	3,270	6,326	1,453	3,202	775	4,493	1,427	1,679	148
Total	26,451		73,347		45,702		32,497		15,706	

(a) Salaried and wages staff; includes temporary employees—Municipal Tramways excluded.
 (b) Trans-Australian and Northern Territory only. Oodnadatta line is worked by S.A. Railways, and Federal Capital Territory lines by N.S.W. Railways, and the officers are included with those States.

CIVIL SERVICE—NUMBER OF PERMANENT OFFICERS 1923-24—*continued.*

	W. Australia.		Tasmania.		N. Territory.		Australia.		
	M.	F.	M.	F.	M.	F.	M.	F.	Total.
(a) Railways and Tramways ..	8,263		1,596		(b)		(c)	(c)	129,110
Police	496	6	239	1	32	..	6,539	24	6,563
Teachers	638	1,312	326	865	4	8	10,360	16,546	26,906
Other Departments ..	1,257	168	596	116	(b)	(b)	39,690	7,357	47,047
Total	12,140		3,739		44		(c)	(c)	209,626

(a) Salaried and wages staff; includes temporary employees—Municipal Tramways excluded.
 (b) Included with Commonwealth. (c) Not available.

§ 6. Legislation during 1924.

1. **General.**—The following summary refers to the more important legislative enactments of the Commonwealth and State Parliaments during the year 1924. The necessary Appropriation Acts are also passed each year. Reference is also made to the principal Ordinances promulgated during the same year in the Northern Territory and Federal Capital Territory. For the sake of convenience these have been included after the heading 2, Commonwealth, immediately following.

2. **Commonwealth.**—(i) *Main Roads Development.* £1,000,000 is provided for development of main roads.

(ii) *National Debt Sinking Fund.* Additional payments to the fund are arranged.

(iii) *Oil Agreements.* Approval is given for increasing Commonwealth's capital in the Anglo-Persian Oil Company Limited.

(iv) *Seat of Government (Administration).* A Federal Capital Commission is established as a body corporate, charged with the administration of the Territory.

(v) *Commonwealth Electoral.* Compulsory voting is enacted.

(vi) *War Pensions Appropriation.* £10,000,000 is appropriated for war pensions.

(vii) *Commonwealth Bank.* Management of Bank by Board of Directors (Governor and seven other directors) is enacted. Capital of bank to be £20,000,000. Settlement of balances between banks is to be conducted through the Commonwealth Bank.

(viii) *States Loan.* Authority is given to raise moneys to be loaned to the States, and to convert States loans.

(ix) *Wireless Agreement.* Approval is given to the agreement made between the Commonwealth Government and Amalgamated Wireless (Australasia) Limited.

(x) *Superannuation.* Military and Air Forces are brought under the Superannuation scheme.

(xi) *Income Tax.* Rates for 1924-25 are fixed.

(xii) *Income Tax Assessment.* Taxable income is further defined, particularly as regards that arising from sale of trading stock.

(xiii) *Grafton to South Brisbane Railway.* Approval is given to agreement made between the Commonwealth, New South Wales, and Queensland for the construction of the railway.

(xiv) *Hop Pool Agreement.* Execution of agreement between the Commonwealth and the Tasmanian Hop Growers' Pool Limited is authorized.

(xv) *Cattle Bounty Export.* Provision is made for payment of a bounty on the export of live cattle.

(xvi) *Dried Fruits Advances.* Provision is made for payment of advances to producers of dried fruits.

(xvii) *Wine Export Bounty.* Provision is made for payment of a bounty on the export of fortified wine.

(xviii) *Tasmania Grant.* Financial assistance (£255,000) is given to Tasmania.

(xix) *Dairy Produce Export Control.* A Control Board is constituted. Butter and cheese are not to be exported save in accordance with the Board's determination, and by licence.

(xx) *Dried Fruits Exports Control.* A Control Board is constituted. Currants, dried sultanas, and dried lemons are not to be exported save in accordance with Board's determination, and by licence.

(xxi) *Export Guarantee.* Provision is made for guarantees of advances made upon the export of produce.

(xxii) *Meat Industry Encouragement.* Provision is made for improvement of the meat industry.

3. *Northern Territory.*—(i) *Opium Smoking Prohibition.* Smoking of and traffic in opium is forbidden.

(ii) *Health.* Health areas may be declared.

(iii) *Poisons.* Only licensed vendors may sell poisons. No poison is to be sold to aboriginals.

(iv) *Aboriginals.* Aboriginal institutions are protected from trespassers.

(v) *Crown Lands.* A Land Board is constituted. Future alienation of Crown lands shall only be by way of lease. Methods of granting leases and licences are prescribed.

(vi) *Licensing.* The supply of intoxicants is regulated. Importation of liquor without permit is forbidden. Licences may be granted; but not to aboriginals or half-caste natives of Australia, Asia, Africa, or Pacific Islands.

(vii) *Encouragement of Primary Production.* A Primary Producers Board is constituted for aiding primary production by advances for implements, buildings, live stock, rations, seed, fishing nets, etc.

(viii) *Inspection of Boilers.* Requirements in the construction of boilers are defined, and arrangements made for inspection.

(ix) *Income Tax.* Rates for 1924–25 are declared.

4. *Federal Capital Territory.*—(i) *Fire Brigades.* Care and control of fire appliances is provided for.

(ii) *Leases.* A Land Board is constituted for the consideration of all questions relating to the grant and termination of leases.

5. *New South Wales.*—(i) *Sydney Corporation Amendment.* Redistribution into wards is enacted.

(ii) *Crimes.* Important amendments of the criminal law are made.

(iii) *Income Tax.* Levy is authorized, and rates declared.

(iv) *Grafton-Kyogle to South Brisbane Railway.* Agreement with Commonwealth and Queensland is ratified.

(v) *Main Roads.* Main and developmental roads are provided for, and a Main Roads Board constituted.

(vi) *Prickly-pear.* A Prickly-pear Destruction Board is constituted, and provision made for the eradication of the pest.

(vii) *Nurses' Registration.* Provision is made for the registration and regulation of nurses.

(viii) *Plant Diseases.* Prevention and eradication of fruit diseases and pests is provided for. Orchards and nurseries are to be registered.

(ix) *Voluntary Wheat Pool Guarantee.* The State Treasurer is authorized to make agreements regarding a voluntary wheat pool.

(x) *Administration of Justice.* Important amendments of the law regarding the administration of justice are made.

(xi) *Electoral Contractors' Licensing.* A Licensing Board is created, and registration enforced.

(xii) *Metropolitan Water, Sewerage, and Drainage.* Important amendments and additions are made.

(xiii) *Forestry.* The Forestry Commission is re-constituted.

(xiv) *Motor Vehicles (Taxation).* Rates of tax on motor vehicles are declared.

(xv) *Co-operative Community Settlement, and Credit.* Provision is made for the formation, registration, and management of co-operative societies of various kinds. An Advisory Council is constituted; and the Building and Co-operative Societies Act 1901 is repealed.

6. *Victoria*.—(i) *Parliamentary Elections (Women Candidates)*. Royal assent was proclaimed on 12th May, 1924, to an Act of 1923, enabling women to become candidates for Parliament.

(ii) *Public Account Advances*. Advances may be made out of the Public Accounts to Departments.

(iii) *Cattle Compensation*. Provision is made to compensate owners of cattle or carcasses destroyed because of disease. A fund is established, by taxing sales of cattle.

(iv) *Discharged Soldiers' Settlement*. £2,000,000 additional may be raised for soldier settlement.

(v) *Country Roads Loan Application*. £1,500,000 additional may be applied out of loan funds for country roads.

(vi) *Wire Netting*. The law relating to wire netting and fences is amended. Sales of wire netting to councils, for supplying land-owners, ceases.

(vii) *Children's Maintenance*. Payment by persons responsible for maintenance of wards by Children's Welfare Department (formerly Neglected Children's Department) is more strictly enforced.

(viii) *The Melbourne Electric Supply Company*. Agreement between the Government and the Company relating to extension of undertakings by the Company is ratified and validated.

(ix) *Electricity Supply Loan Application*. £1,569,500 may be applied for works and undertakings of the Electricity Commission.

(x) *Land Tax*. Rate of land tax for 1925 is declared.

(xi) *Victorian Loan (Forests)*. £500,000 may be raised for improvement and development of forests, and for reafforestation.

(xii) *Income Tax*. Rates for 1924–25 are declared, and the Income Tax Acts as amended are continued.

(xiii) *Motor Omnibus*. Governor in Council may prescribe routes, time-tables, fares, and maximum number of motor omnibuses on prescribed routes. The vehicles must be registered and licensed as hackney carriages. Regular service is to be maintained. A Metropolitan Roads Fund is established, by payment of fees. An Advisory Committee of five members is constituted.

(xiv) *Highways and Vehicles*. The Country Roads Board may declare highways, and is charged with the duty of maintaining them. Restriction is placed on width, height, and weight of motor cars and their loads. Limits of speed are declared for various classes of cars.

7. *Queensland*.—(i) *Industry Amendment*. Registration of cotton growers is made compulsory.

(ii) *Blind, Deaf, and Dumb Children's Instruction*. Better provision is made for maintenance and instruction of blind, deaf, and dumb children.

(iii) *Commonwealth and State Income Tax Agreement*. The State is empowered to assess and collect income tax for the Commonwealth.

(iv) *Income Tax*. The law relating to income tax is consolidated and amended.

(v) *Apprenticeship*. Apprenticeship in certain trades and industries is regulated. A register is to be kept by the Director of Labour, and an Apprenticeship Executive is to be constituted to advise the Minister; group apprenticeship committees and advisory committees are also to be established.

(vi) *Land Acts Amendment*. The Acts relating to land settlement, including discharged soldiers and closer settlement, are amended.

(vii) *Public Service Amendment*. The *Industrial Arbitration Act* is extended to public servants.

(viii) *Weights and Measures*. Weights and Measures in the State Treasury are declared to be standard. The law generally is constituted and amended.

(ix) *City of Brisbane*. The constitution of the governing body and remuneration of its members are declared, areas defined, qualifications of electors and aldermen stated, method of conducting elections decreed.

(x) *City of South Brisbane Improvement*. The Council is authorized to resume property for road extension and improvement.

(xi) *Brisbane-Kyogle-Grafton Railway Agreement*. Agreement with Commonwealth and New South Wales is ratified.

8. *South Australia.*—(i) *Real Property (Commonwealth Titles).* Provision is made for bringing land acquired by the Commonwealth under the Real Property Acts and regulating dealings with such land in accordance therewith.

(ii) *Criminal Appeals.* Right of appeal in criminal cases is given. Procedure and rules of court are defined.

(iii) *Adelaide University.* The Adelaide University is authorized to confer degrees in dental science. Degrees of the status of master and doctor give membership of the University Senate.

(iv) *Registration of Dogs.* All dogs over 3 months old are to be registered according to correct description, and re-registered annually. In certain circumstances, trespassing, diseased and stray dogs are to be destroyed.

(v) *Money Lenders.* Any court may re-open transactions of money lending, hire purchasing, etc., and relieve debtors. Infants are not to be solicited or invited to borrow money.

(vi) *Engine-drivers.* Only persons certificated mechanically and medically may be in charge of engines or boilers.

(vii) *Companies (Mortgages, Charges, and Debentures).* Mortgages and charges of a company must be registered.

(viii) *Voluntary Wheat Pool Agreement Ratification.* The Agreement is ratified and approved.

(ix) *Trading Stamp.* Use of trading stamps and coupons is prohibited.

(x) *Sinking Fund.* A Public Debt Commission is authorized, and provision made for redemption of the public debt.

(xi) *Stock Diseases (poultry).* An Inspectorate of poultry is authorized.

(xii) *Fences.* Occupiers of adjoining lands may be made to contribute to construction and maintenance of a sufficient fence.

(xiii) *Railway Refreshment Rooms.* The Railway Commissioners may supply liquor at railway refreshment rooms without a licence. Early closing acts are not to apply to certain railway refreshment rooms.

(xiv) *Industrial Code Amendment.* The Industrial Code is extended to public servants and others.

(xv) *Stock Mortgages and Wool Loans.* Better provision is made with respect to security over live stock and wool.

(xvi) *Irrigation Act Amendment.* Land other than blocks and township allotments may be leased.

(xvii) *Gas.* Price of gas is regulated, and standards of quality and pressure prescribed.

(xviii) *Fair Prices.* Investigations into the existence of combines and restriction of their operations to the detriment of the public is authorized.

(xix) *Taxation.* Alteration is made in the deductions allowed in respect of children.

(xx) *Dried Fruits.* Provision is made for the marketing of dried fruits, a "Dried Fruits Board" being constituted.

9. Western Australia.—Legislation for 1924 may be found in Appendix.

10. *Tasmania.*—(i) *Marriage.* Marriage with deceased husband's brother is valid.

(ii) *Commonwealth and State Statistical Agreement.* Agreement respecting the establishment by the Commonwealth of a Statistical Bureau in Tasmania is ratified and confirmed.

(iii) *Maintenance Orders.* Enforcement in Tasmania of maintenance orders made in New Zealand is facilitated.

(iv) *Wood-pulp and Paper Industry.* Manufacture of wood-pulp and paper in Tasmania is encouraged, and rights and concessions with a view thereto are granted.

(v) *Local Government.* Councils may establish a "Bush-nursing" Scheme.

§ 7. Consular Representatives of Foreign Countries in Australia.

The following tabular statement shows the number of consular representatives of foreign countries in each State for the year 1925 :—

CONSULAR REPRESENTATIVES IN AUSTRALIA, 1925.

Country.	Number of Consular Representatives in—						
	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Total Aust.
Argentine Republic	2	2	1	1	..	1	7
Austria .. .. .	..	1	..	..	..	..	1
Belgium	4	1	1	1	1	1	9
Brazil	1	1	..	1	..	1	4
Chile	1	1	1	1	1	..	5
China .. .. .	..	1	..	..	..	..	1
Colombia	2	1	..	..	..	..	3
Czecho-Slovakia	1	..	1	..	..	..	2
Denmark	3	3	3	2	1	1	13
Ecuador	2	..	..	..	..	..	2
Estonia	1	..	..	..	..	..	1
Finland	1	1	1	1	..	..	4
France	3	1	1	1	1	1	8
Germany .. .. .	..	2	..	..	..	..	2
Greece	2	1	1	..	1	..	5
Guatemala .. .. .	..	1	..	..	..	..	1
Honduras .. .. .	..	1	..	..	..	..	1
Italy	1	2	2	1	1	1	8
Japan	1	1	1	1	1	..	5
Liberia	1	..	..	1	..	..	2
Netherlands	3	1	3	1	1	1	10
Nicaragua .. .. .	..	1	..	..	..	..	1
Norway	3	3	2	3	3	2	16
Panama	3	1	1	..	..	..	5
Paraguay	1	1	..	1	1	..	4
Peru	2	1	..	1	..	..	4
Poland	1	..	..	..	..	..	1
Portugal	1	1	..	..	..	..	2
Salvador .. .. .	..	1	..	..	..	..	1
Serb-Croat-Slovene State	1	..	..	..	..	..	1
Spain	1	2	1	1	1	..	6
Sweden	3	1	2	3	2	1	12
Switzerland	1	1	1	..	..	..	3
U.S.A.	4	4	1	1	1	..	11
Uruguay	1	1	..	..	..	..	2
Venezuela	1	..	..	..	..	..	1
Total	52	40	24	22	16	10	165*

* In addition, Northern Territory has a Consul for Netherlands.

Countries having Consuls-General in Sydney are Belgium, Chile, Czecho-Slovakia, Denmark, Ecuador, Estonia, France, Greece, Japan, Netherlands, Paraguay, Peru, Poland, and Sweden. Those having Consuls-General in Melbourne are Argentine, China, Colombia, Germany, Honduras, Norway, Spain, Switzerland, and U.S.A. The Consul-in-chief for Panama is located at Newcastle, New South Wales.

CHAPTER IV.

LOCAL GOVERNMENT.

§ 1. Introduction.

1. **General.**—The construction and maintenance of roads, bridges and ferries are generally part of the functions of local authorities, but in New South Wales and South Australia, more especially in the large unincorporated areas, these duties are undertaken directly by the Government. In some States, moreover, a certain proportion of the roads and bridges are constructed and maintained by the Government, which, in addition, advances money for main roads to be expended by municipalities under the supervision of special Boards. Although roads, bridges and ferries constructed and maintained directly by Government do not properly come under the heading of "Local Government," they have been included in this chapter for the sake of convenience.

2. **Municipalities, Shires, etc.**—A description of the various systems of municipal government in the different States, and their development from the earliest date, was published in 1919 by the Commonwealth Bureau of Census and Statistics in a separate work entitled "Local Government in Australia." Limits of space preclude the incorporation of the information contained therein in the Official Year Book.

3. **Water Supply and Sewerage.**—In the cities of Sydney, Melbourne and Brisbane, the control of water supply and sewerage is in the hands of special Boards, while in Adelaide and Perth, these services are under the direct supervision of Government Departments. In most of the other cities and towns, the municipal councils, or, in some cases, water trusts, are the controlling bodies, which either construct the works out of their own resources or take them over after they have been constructed by the Government.

4. **Harbours.**—The majority of the harbours in Australia are managed by Boards, the members of which are either elected by persons interested or appointed by the Government. In a few instances, however, they are directly controlled by the Government. Only those which are controlled by Boards are dealt with in the following pages.

5. **Fire Brigades.**—In all the States, the management of fire brigades is undertaken by Boards. The members of these Boards are usually elected by the councils of municipalities and insurance companies within the districts placed under their jurisdiction, together with one or more appointed by the Government. Occasionally volunteer or country fire brigades are represented.

§ 2. Government Roads, Bridges, Etc.

1. **New South Wales.**—(i) *General.* The control of all roads, bridges and ferries, with the exception of those proclaimed as "National" and of those in the unincorporated areas of the Western Division, which still remain under its jurisdiction, was transferred, in 1920, from the Public Works Department to local authorities. The Government has also adopted the policy of assisting municipal and shire councils to recondition certain main roads by doing the work in the first instance, and recovering in instalments from the councils concerned one-half of the cost.

(ii) *Roads, Bridges and Ferries.* At the end of 1923, the "National" works consisted of 58 miles of roads, 283 bridges with a total length of 108,631 feet, and 23 ferries, while in the unincorporated areas of the Western Division there were 6,053 miles of roads (of which 213 miles were metalled or ballasted, 163 formed only, and 3,437 cleared only), 99 bridges of a total length of 13,602 feet, 340 culverts, and 6 ferries under the control of the Public Works Department.

(iii) *Expenditure on Roads, Bridges and Ferries.* The total Government expenditure on roads, bridges and ferries from 1857 to 1923-24 was £25,884,339. The following table shows the expenditure for each year from 1918-19 to 1923-24 :—

**ROADS, ETC.—EXPENDITURE BY GOVERNMENT DEPARTMENTS,
NEW SOUTH WALES, 1919 TO 1924.**

Year ending 30th June.	1919.	1920.	1921.	1922.	1923.	1924.
	£	£	£	£	£	£
Expenditure	88,591	116,034	163,121	542,205	443,541	458,415

2. *Victoria.*—(a) *General.* A small sum is expended annually by the State Government on roads and bridges, and a considerable amount of loan money is advanced in each year to the Country Roads Board for the purpose of constructing and maintaining main and developmental roads, the amount so expended during the year ending 30th June, 1924, being £566,596. An annual payment of £50,000 is also made out of Consolidated Revenue to the Board for maintenance works.

(b) *Direct Expenditure by Government.* The following table shows the amounts of money expended directly by the Government on roads and bridges during the years 1918-19 to 1923-24 :—

**ROADS AND BRIDGES—GOVERNMENT EXPENDITURE, VICTORIA,
1918-19 TO 1923-24.**

Year.	1918-19.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
	£	£	£	£	£	£
Expenditure ..	20,591	7,832	10,842	23,622	65,459	46,761

(c) *Country Roads Board.* The duties of this Board were given in some detail in Year Book No. 15, p. 526.

The borrowing of a sum of £3,000,000 has been authorized for the purposes of making permanent works under the Country Roads Acts. One half of the amount expended on permanent works and maintenance must be refunded by the municipalities affected, six per cent. of the amount due in respect of permanent works being payable annually, and the cost of maintenance allocated to each municipality must be paid before the first of July in each year. A special rate, not exceeding six pence in the pound may be levied in any ward or riding of a municipality for the purpose of such repayment.

All registration fees, licence fees and fines under the Motor Car Act, all licence fees for unused roads and water frontages, and all registration fees and fines for traction-engines are credited to the Country Roads Board Fund. The total loan expenditure for permanent works to the 30th June, 1923, was £2,732,155. The following table gives the revenue and expenditure on permanent and maintenance works for the five years 1918-19 to 1922-23:—

**COUNTRY ROADS BOARD, VICTORIA—REVENUE AND EXPENDITURE,
1918-19 TO 1922-23.**

Year ended 30th June.	Revenue.					Expenditure.	
	Motor Regis- tration and Licence Fees.	Unused Roads etc., Licence Fees.	Contributions by Municipalities.		Total.	Permanent Works.	Main- tenance.
			Permanent Works.	Main- tenance.			
	£	£	£	£	£	£	£
1919	67,666	22,374	29,841	82,453	261,655	284,734	179,133
1920	85,303	22,072	37,573	89,730	294,498	335,755	192,320
1921	98,135	21,441	50,036	90,335	342,865	271,869	221,395
1922	118,672	21,487	61,024	104,026	429,308	288,937	267,969
1923	153,249	19,933	68,608	123,819	514,469	266,046	288,129

(d) *Developmental Roads.* For the purpose of constructing and maintaining subsidiary or developmental roads, the Government may borrow the sum of £5,000,000. The work is carried out under the supervision of the Country Roads Board, and the State provides the whole of the money and makes provision out of State funds for liquidating the liability; the municipalities, however, are required to bear a proportion of the interest on the outlay during the period of the loan and to maintain the roads when constructed. The amount expended during the year ended 30th June, 1923 was £364,112, and the total expenditure to that date was £2,049,320.

3. *Queensland.*—Under the Main Roads Act of 1920, a Main Roads Board was constituted, consisting of three members appointed by the Governor in Council. The duties of this Board are to make the necessary surveys and investigations in order to determine what roads should be main roads, and, under certain circumstances, to undertake the construction and maintenance of such roads. Before any road can be proclaimed a main road, the shire councils through whose areas such road passes have the right to lodge objections thereto, and the Board must consider such objections and may vary its decision. The whole of the money necessary for the construction and maintenance of main roads is provided from the Main Roads Fund at the Treasury, and the councils concerned must repay one-half the cost thereof over a period of 30 years, with interest. This fund is formed from (a) moneys appropriated by Parliament therefor, (b) taxes and fees on motor vehicles, traction engines and wheels of vehicles, (c) fees and rents for unused roads, (d) moneys received for the sale of timber, sand, etc., on any main road, and (e) all other moneys received or recovered by the Board. Wherever possible, the Board arranges with local authorities to undertake the survey and construction of works, but in most cases, owing to the dearth of trained engineers in the employ of councils, the Board has had to undertake most of the survey work and preparation of plans and a considerable portion of the construction. During the year ended 30th June, 1924, the receipts of the Board amounted to £695,469, including £496,000 from the Treasury Loan Fund and £103,398 from motor fees, and the disbursements to £519,878, including £311,957 expenditure on permanent works and £20,200 on maintenance of main roads. At that date, 2,881 miles of roads had been gazetted as main roads, 283 miles had been surveyed during the year, and the estimated cost of works for which plans were in hand or completed, including bridges, was £463,698.

The money made available to the State under the Commonwealth "Main Roads Development Act" is allocated and expended under the direction of the Main Roads Board.

The developmental roads sections of "The Main Roads Acts 1920 to 1923" provide that on such roads the Board will be responsible for the total cost of construction, but that the Local Authorities concerned shall repay half the interest over a period of twenty years, and that the Local Authorities shall be responsible for maintenance.

4. **South Australia.**—Under the Main Roads Act of 1922, the Government is authorized to borrow up to £300,000 for the purpose of reconstructing main roads and for acquiring quarries and working the same. In the sparsely settled districts outside the incorporated areas, the roads and bridges are constructed and maintained by the Public Works Department, which expended thereon during the year ended 30th June, 1924, the sum of £25,941. During the same year, the Government expended £164,323 from loan funds on roads. In addition, a large amount of money is allocated annually to the municipal corporations and district councils solely for the construction and maintenance of main roads within their boundaries.

The Roads Improvement Act 1921 provides for the constitution of a Roads Advisory Board, consisting of three members of the Public Service appointed by the Governor. Main roads may be proclaimed. The duties of the Board are to advise the Minister as to the moneys which should be expended by each council on the construction, maintenance and keeping in repair of the main roads within its district, and the amount of money voted for main roads which should be allocated to each council. The Minister determines (a) the total amount of money to be expended by each council for such purposes during each financial year, (b) the amount to be allocated to each council, and (c) the amount to be spent by each council out of revenue, for which a council may declare a special rate not exceeding fourpence in the pound, but the amount under (c) must not exceed one-half the amount under (b). Should a council make default in carrying out the work prescribed, the Engineer for Roads and Bridges may undertake it, and half the amount of the cost thereof becomes a debt due by such council to the Minister.

5. **Western Australia.**—In Western Australia the construction, maintenance, and management of roads and bridges throughout the State are under the control of municipalities and district road boards which are subsidized by the Government.

6. **Tasmania.**—(i) *Construction.* In Tasmania the cost of construction of roads and bridges is borne almost entirely by the central Government.

Up to the 30th June, 1924, the loan expenditure on these works was £3,903,835. In addition, half the proceeds of the sale of land has formed a Crown Lands Fund for the construction of roads to new holdings. Under this provision £670,565 has been expended. This fund has in recent years more than met the demands on it, and expenditure therefrom since 1918 has been limited to £10,000 annually, the balance being used for redemption of debt. The following table gives particulars of the amount and cost of construction for the last five years:—

ROADS AND BRIDGES, TASMANIA—GOVERNMENT EXPENDITURE ON CONSTRUCTION TO 30th JUNE, 1924.

Period.				Expenditure.		New-road Mileage.		New Bridges.
				Loans.	Crown Lands Fund.	Cleared.	Metalled.	
				£	£	Miles.	Miles.	No.
1919-20	..	..	..	81,940	6,563	67	68	17
1920-21	..	..	..	100,621	4,744	62	80	8
1921-22	..	..	..	99,760	8,198	69	73	27
1922-23	..	..	..	71,017	6,412	47	57	13
1923-24	..	..	..	56,752	5,537	53	48	15

(ii) *Maintenance.* The maintenance of roads and bridges is undertaken by the municipalities with some assistance from the central Government, chiefly by way of subsidy. Under the Aid to Road Rates Act, a sum of £11,000 is distributed annually among the municipalities, in proportion as the cost of maintenance falls on their resources. Under the Main Roads Maintenance Act 1918 a further sum of £5,000 was provided out of Consolidated Revenue, which, with the addition of the motor tax, less 5 per cent., and a contribution from municipalities, is expended on the upkeep of main roads. In 1923-24 the amount available for 1,100 miles of main road was £36,400. The work is carried out in most cases by municipalities, under the general direction of an Advisory Board, on which the Government, the municipalities, and the motorists are all represented. Further, the Repairs to Roads Act 1920 provides for loans for 15 years to municipalities for the purpose of re-making roads—half the loan is repaid in instalments by the local body and the remainder by the State Government. The Government also provides for the repair of the more important bridges, and for emergency work.

The above provision for maintenance has, however, in recent years been found insufficient to cope with the heavier motor traffic and the demand for a better road surface, and further legislation is in contemplation.

7. *Summary of Loan Expenditure on Roads and Bridges.*—Figures showing the total expenditure on roads and bridges in the States are not available. The subjoined statement, however, gives the amounts of loan expenditure by the State Governments up to the 30th June, 1924 :—

**ROADS AND BRIDGES.—GOVERNMENT LOAN EXPENDITURE TO THE
30th JUNE, 1924.**

Expenditure.	N.S.W.	Victoria. (a)	Q'land. (b)	S. Aust.	W. Aust.	Tasmania.	All States.
	£	£	£	£	£	£	£
Total to 30/6/23	2,381,744	4,724,249	931,775	2,110,535	459,468	3,847,083	14,454,854
„ „ 30/6/24	2,567,322	5,290,845	931,775	2,276,475	525,477	3,903,835	15,495,729

(a) This expenditure is from loan funds on country roads ; temporary advances not included.

(b) In addition, Main Roads Board loan expenditure to 30th June, 1924, was £773,500.

The following table shows the annual expenditure from loans on roads and bridges by the central Governments in each State during the years 1919-20 to 1923-24 :—

ROADS AND BRIDGES.—LOAN EXPENDITURE BY STATES, 1920 TO 1924.

Year ended 30th June.	N.S.W.	Victoria.	Q'land. (a)	S. Aust.	W. Aust.	Tasmania.	All States.
	£	£	£	£	£	£	£
1919-20 ..	6,674	623,570	..	66,393	14,538	81,940	793,115
1920-21 ..	13,555	965,646	..	120,223	32,121	100,621	1,232,166
1921-22 ..	320,271	960,821	..	109,120	12,585	99,760	1,502,557
1922-23 ..	231,271	573,972	217,500	62,510	34,311	71,017	1,190,581
1923-24 ..	185,578	960,821	496,000	165,940	66,009	56,752	1,931,100

(a) Main Roads Board loan expenditure.

The two tables given above show only a small proportion of the actual expenditure upon roads and bridges in the different States, for the reason that (a) there have been large expenditures from revenue, both by the central Governments and by local authorities, and (b) the State Governments have in many cases voted grants and subsidies on the amount of rates collected, and have issued loans to local authorities either for the express purpose of the construction of roads and bridges or for the general purpose of public works construction.

§ 3. Municipalities, Shires, Etc.

1. New South Wales.—(i) *General*. Practically the whole of the State, with the exception of the Western Division, has been divided into municipalities and shires, the total area incorporated at the end of 1923 being 183,976 square miles, of which 2,836 square miles are included in the former and 181,140 in the latter. The areas incorporated comprise the whole of the eastern and central divisions of the State, with the exception of Lord Howe Island, the islands in Port Jackson, and the quarantine station at Port Jackson.

(ii) *Municipalities*.—(a) *Summary*. The following table gives the number, area and population of municipalities, together with the length of roads and the number of bridges and ferries therein for the years 1919 to 1923 :—

MUNICIPALITIES, NEW SOUTH WALES—SUMMARY, 1919 TO 1923.

Year.	No. of Municipalities.	Sydney and Suburbs.		Country.		Length of Roads.	Bridges.	Ferries.
		Area.	Population.	Area.	Population.			
1919	183	95,259	811,910	1,710,475	482,860	(a)	(a)	(a)
1920	185	95,259	881,594	1,725,875	525,264	(a)	(a)	(a)
1921	185	95,259	906,320	1,725,875	531,090	10,187	745	26
1922	185	95,259	934,970	1,725,875	536,050	(a)	(a)	(a)
1923	184	95,259	959,720	1,720,275	545,850	(a)	(a)	(a)

(a) Not available—collected triennially.

Of the 10,187 miles of roads, 4,474 were metalled, ballasted or gravelled, 1,912 formed only, and 2,162 cleared only, while 1,639 miles were natural surface.

(b) *Unimproved and Improved Values*. The following table gives a comparison of the unimproved and improved values for the years 1919 to 1923 inclusive :—

MUNICIPALITIES, NEW SOUTH WALES.—CAPITAL VALUES, 1919 TO 1923.

Year.	Sydney.	Suburbs.	Total Metropolis.	Country.	Grand Total.
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UNIMPROVED VALUE.

	£	£	£	£	£
1919	31,831,054	39,672,190	71,503,244	25,289,371	96,792,615
1920	33,077,620	46,847,825	79,925,445	29,060,263	108,985,708
1921	35,887,412	51,027,987	86,915,399	30,706,273	117,621,672
1922	36,838,607	54,642,223	91,480,830	32,343,067	123,823,897
1923	36,918,354	60,984,924	97,903,278	34,238,069	132,141,347

IMPROVED VALUE.

	£	£	£	£	£
1919	82,808,760	111,686,717	194,495,477	66,059,272	260,554,749
1920	84,580,400	127,414,223	211,994,623	77,900,508	289,895,131
1921	99,647,060	141,632,450	241,279,510	88,922,248	330,201,758
1922	103,667,740	155,607,105	259,274,845	90,627,326	349,902,171
1923	107,239,980	174,364,307	281,604,287	99,739,138	381,343,425

(c) *Revenue and Expenditure.* The following table gives particulars of the revenue and expenditure of municipalities for the year ending 31st December, 1923, under various headings :—

MUNICIPALITIES, NEW SOUTH WALES.—REVENUE AND EXPENDITURE, 1923.

Particulars.	Sydney.	Suburbs.	Country.	Total.
REVENUE.				
	£	£	£	£
General fund	2,568,357 (a)	1,622,785	1,031,024	2,653,809 (b)
Trading accounts		26,496	516,889	543,385 (b)
Special and local funds		59,981	288,741	348,722 (b)
Gross revenue	2,568,357	1,709,262	1,836,654	6,114,273

EXPENDITURE.				
	£	£	£	£
General fund	2,371,043 (a)	1,715,797	1,004,555	2,720,352 (b)
Trading accounts		18,715	439,872	468,587 (b)
Special and local funds		55,608	267,307	322,915 (b)
Gross expenditure	2,371,043	1,790,120	1,711,734	5,872,897

(a) Items of revenue and expenditure for the city of Sydney cannot be allocated to the different headings shown for municipalities. (b) Exclusive of Sydney.

The subjoined table shows the gross revenue and expenditure of all municipalities for the five years 1919 to 1923 :—

MUNICIPALITIES, NEW SOUTH WALES.—REVENUE AND EXPENDITURE, 1919 TO 1923.

Municipalities.	1919.	1920.	1921.	1922.	1923.
GROSS REVENUE.					
	£	£	£	£	£
Sydney	1,483,810	1,724,858	2,068,153	2,348,854	2,568,357
Suburban	1,012,024	1,200,139	1,413,469	1,561,760	1,709,262
Country	1,271,005	1,357,065	1,582,055	1,701,288	1,836,654
Total	3,766,839	4,282,062	5,063,677	5,611,902	6,114,273
GROSS EXPENDITURE.					
	£	£	£	£	£
Sydney	1,454,277	1,747,972	2,060,635	2,187,856	2,371,043
Suburban	987,885	1,145,765	1,511,543	1,618,413	1,790,120
Country	1,228,553	1,293,564	1,507,423	1,637,140	1,711,734
Total	3,670,715	4,187,301	5,079,601	5,443,409	5,872,897

(d) *Assets and Liabilities.* The financial position of the municipalities as at the 31st December, 1923, is shown by the following statement of assets and liabilities.

MUNICIPALITIES, NEW SOUTH WALES.—ASSETS AND LIABILITIES, 1923.

Particulars.	Sydney.	Suburbs.	Country.	Total.
ASSETS.				
	£	£	£	£
Bank balance and cash	15,845,841 (a)	179,295	346,449	525,744 (b)
Outstanding rates		96,532	174,139	270,671 (b)
Sundry debtors		98,725	206,096	304,821 (b)
Stores and materials		28,076	90,082	118,158 (b)
Land, buildings, furniture etc. ..		835,386	4,070,245	4,905,631 (b)
Other		30,314	38,657	68,971 (b)
Total	15,845,841	1,268,328	4,925,668	22,039,837
LIABILITIES.				
Loans, outstanding interest and sundry creditors	15,401,033 (a)	1,518,185	1,417,105	2,935,290 (b)
Debts due to Government and interest thereon		109,937	1,977,339	2,087,276 (b)
Bank overdrafts		199,162	152,244	351,406 (b)
Other		26,313	94,142	120,455 (b)
	15,401,033	1,853,597	3,640,830	20,895,460

(a) Particulars for the city of Sydney cannot be allocated to the different headings shown for municipalities.
(b) Exclusive of Sydney.

(iii) *Shires.*—(a) *Summary.* The following table gives the number, area, population, and unimproved capital value of shires, together with the length of the roads, and the number of bridges and ferries therein. It is not possible to give the improved capital value or the assessed annual value, as shires are not compelled to make these valuations.

SHIRES, NEW SOUTH WALES.—SUMMARY, 1919 TO 1923.

Year.	No. of Shires.	Area.	Population.	Unimproved Capital Value.	Length of Roads.	Bridges.	Ferries.
	No.	sq. miles.	No.	£	miles.	No.	No.
1919	136	180,708	692,230	110,881,306	(a)	(a)	(a)
1920	136	181,140	670,123	120,872,326	(a)	(a)	(a)
1921	136	181,140	676,130	130,834,456	85,458	3,627	175
1922	136	181,140	688,560	135,380,748	(a)	(a)	(a)
1923	136	181,140	691,000	140,392,104	(a)	(a)	(a)

(a) Not available—collected triennially.

Of the 85,458 miles of roads, 17,216 were metalled or ballasted, 12,200 formed only, and 26,538 cleared only, the balance being natural surface.

(b) *Revenue and Expenditure.* The revenue and expenditure of shires for the years 1919 to 1923 are shown in the following table. Included in the receipts for 1923 are Government grants amounting to £167,169:—

SHIRES, NEW SOUTH WALES,—REVENUE AND EXPENDITURE, 1919 TO 1923.

Particulars.	1919.	1920.	1921.	1922.	1923.
REVENUE.					
<i>General Fund—</i>	£	£	£	£	£
General rates (including interest) ..	742,026	825,781	968,886	1,033,921	1,064,842
Government endowment ..	153,234	156,429	178,420	156,861	150,296
Public works ..	230,673	196,045	188,533	218,952	204,129
Health administration ..	13,731	79,410	84,014	88,165	98,532
Public services ..	12,481	14,630	15,540	16,052	15,712
Shire property ..	15,539	13,456	16,145	20,344	8,124
Miscellaneous ..	7,192	12,125	8,939	13,852	16,977
<i>Special and Local Funds</i> ..	114,885	57,540	87,124	99,960	157,547
Total revenue ..	1,289,761	1,355,416	1,547,601	1,648,107	1,716,159
EXPENDITURE.					
<i>General Fund—</i>					
Administrative expenses ..	115,657	146,762	140,300	168,802	158,362
Public works ..	1,013,337	994,731	1,187,349	1,245,857	1,268,550
Health administration ..	26,237	84,282	89,344	95,578	104,437
Public services ..	21,293	26,239	33,782	32,205	31,526
Shire property ..	17,037	14,935	18,721	18,518	7,041
Miscellaneous ..	16,034	8,589	9,418	11,626*	20,327†
<i>Special, Local, and Loan Funds</i> ..	98,403	50,210	78,474	91,295	131,715
Total expenditure ..	1,307,998	1,325,748	1,557,388	1,663,881	1,721,958

* Includes £7,597 for interest on loans and overdrafts. † Includes £13,185 for interest.

(c) *Assets and Liabilities.* The finances of the shires at the end of the year 1923 showed an excess of assets of £373,309. The following table gives particulars of assets and liabilities as at the 31st December, 1923 :—

SHIRES, NEW SOUTH WALES.—ASSETS AND LIABILITIES, 1923.

Assets.	Amount.	Liabilities.	Amount.
	£		£
Bank balances and cash ..	231,366	Loans outstanding, interest and	
Outstanding rates ..	155,846	sundry creditors ..	489,424
Sundry debtors ..	39,785	Bank overdrafts ..	207,553
Stores and materials ..	31,513	Other ..	73,278
Land, buildings, furniture, plant,			
machinery, etc. ..	683,397		
Other ..	1,657		
Total ..	1,143,564	Total ..	770,255

2. *Victoria.*—(i) *General.* Local Government is established throughout the State (with the exception of French Island), the various divisions being termed cities, towns, boroughs, or shires. Melbourne and Geelong were incorporated under special statutes prior to the establishment of a general system of local government, and except in a few details are not subject to the provisions of the Local Government Act.

In addition to the endowment of £50,000, the municipalities received from the Government during the financial year 1923–24 a sum of £65,264 out of the Licensing

Fund as the equivalent for (a) fees for licences, (b) fees for the registration of brewers and spirit merchants, and (c) fines, penalties, and forfeitures incurred under the Licensing Act 1915.

The financial years of the cities of Melbourne and Geelong end on the 31st December and the 31st August respectively; those of all other municipalities on the 30th September.

(ii) *Municipalities.*—(a) *Summary.* The following table shows the number of cities, towns, boroughs, and shires, with estimated population, number of ratepayers and dwellings, and value of ratable property for the years 1920 to 1924 inclusive:—

MUNICIPALITIES, VICTORIA.—SUMMARY, 1920 TO 1924.

Year ending 30th September.	Number of Municipal- ities.	Estimated Population.	Number of Ratepayers (both sexes).	Estimated Number of Dwellings.	Estimated Value of Ratable Property.		
					Total.	Annual.	
CITIES, TOWNS, AND BOROUGHs.							
	No.	No.	No.	No.	£	£	
1920..	52	877,880	228,518	200,206	172,838,636	9,687,320	
1921..	55	886,030	237,037	} 205,416a {	193,947,624	10,864,184	
1922..	53	914,371a	245,589		210,501,055	11,869,636	
1923..	53	963,180	270,058		220,392	233,586,201	13,116,589
1924..	53	998,950	279,292		229,066	264,693,364	14,964,345
SHIRES.							
	No.	No.	No.	No.	£	£	
1920..	138	628,420	188,892	142,570	184,599,186	9,340,172	
1921..	138	628,970	198,801	} 142,579a {	205,555,121	10,350,524	
1922..	139	610,987a	201,956		215,984,328	10,875,948	
1923..	139	616,410	200,834		143,809	221,623,773	11,200,825
1924..	139	627,420	213,317		147,830	235,274,597	11,816,074

(a) Census figures.

(b) *Revenue and Expenditure.* The following table shows the revenue from various sources, and the expenditure under various heads, exclusive of loan revenue and expenditure, of municipalities during the years 1919 to 1923:—

MUNICIPALITIES, VICTORIA.—REVENUE AND EXPENDITURE, 1919 TO 1923.

Items.		1919.	1920.	1921.	1922.	1923.
REVENUE.						
		£	£	£	£	£
Taxation	Rates ..	1,560,968	1,750,778	2,083,931	2,303,664	2,559,847
	Licences ..	136,517	135,383	126,952	137,036	152,437
	Dog fees ..	21,074	22,575	23,682	24,316	24,832
	Market and weigh- bridge dues ..	85,240	87,845	91,448	99,485	99,337
Government endowments and grants ..		96,429	74,563	65,581	75,627	60,607
Contributions for streets, etc.		93,900	73,182	84,936	111,983	141,484
Sanitary charges ..		101,996	116,096	133,244	146,559	162,129
Rents ..		69,845	85,517	92,717	102,784	108,502
Other sources ..		714,156	879,024	890,625	1,030,323	1,179,748
Total	..	2,880,125	3,224,963	3,593,116	4,031,777	4,488,923

MUNICIPALITIES, VICTORIA.—REVENUE AND EXPENDITURE, 1919 TO 1923—*continued.*

Items.	1919.	1920.	1921.	1922.	1923.
EXPENDITURE.					
Salaries, etc.	£ 226,692	£ 246,851	£ 284,158	£ 319,430	£ 340,319
Sanitary work, street cleaning, etc.	248,956	306,775	345,834	363,706	396,524
Lighting	100,679	102,945	115,968	130,722	131,342
Fire brigades' contributions	35,120	39,637	46,512	48,526	49,225
Public works { Construction	294,874	208,326	238,165	271,007	294,711
{ Maintenance	1,152,247	1,385,347	1,683,619	1,865,549	1,948,582
Formation of private streets, etc.	111,125	82,746	130,125	147,612	163,660
Redemption of loans	137,688	128,664	133,786	136,090	165,675
Interest on loans	257,057	264,147	276,065	305,289	343,164
Charities	21,103	25,031	29,468	26,436	26,288
Other expenditure	332,347	313,650	315,085	332,067	356,199
Total	2,917,888	3,104,119	3,598,785	3,946,434	4,215,689

(c) *Assets and Liabilities.* The assets of municipalities may be classified under three heads—(a) the municipal fund, (b) the loan fund, and (c) property; the liabilities under two heads—(a) the municipal fund, and (b) the loan fund. The following table shows the amount of municipal assets and liabilities for the years 1919 to 1923 :—

MUNICIPALITIES, VICTORIA.—ASSETS AND LIABILITIES, 1919 TO 1923.

Items.	1919.	1920.	1921.	1922.	1923.
ASSETS.					
MUNICIPAL FUND—	£	£	£	£	£
Uncollected rates	133,585	133,573	158,301	176,830	202,251
Other assets	550,283	483,724	591,508	636,509	730,603
LOAN FUND—					
(a) Sinking funds—					
Amount at credit	465,132	489,332	523,834	430,689	455,766
Arrears due	1,093	3,098	483	511	670
(b) Unexpended balances	204,761	221,405	331,561	442,360	526,622
PROPERTY—					
Buildings, markets, etc. ..	3,938,068	4,077,892	4,457,527	4,804,008	5,170,071
Waterworks	271,581	270,147	256,169	253,520	255,737
Gasworks	114,505	117,704	123,454	129,020	145,874
Total	5,679,008	5,796,875	6,442,837	6,873,447	7,487,594
LIABILITIES.					
MUNICIPAL FUND—					
Arrears due sinking funds	1,093	3,098	483	511	670
Overdue interest	6,611	7,091	5,379	6,026	8,054
Bank overdrafts	484,785	442,326	542,462	858,733	665,866
Other liabilities	280,475	281,675	352,518	389,340	440,031
LOAN FUND—					
Loans outstanding	5,041,429	5,192,069	5,595,614	5,714,570	6,601,731
Due on loan contracts	129,192	220,188	158,009	177,755	380,839
Due on current contracts	64,037	85,368	102,191	88,936	155,233
Total	6,007,622	6,231,815	6,756,656	7,235,871	8,252,424

3. Queensland.—(i) *General.* The whole of the State is incorporated into cities, towns, and shires under the Local Authorities Act of 1902 and its amendments.

(ii) *Municipalities.* (a) *Summary.* The following table gives particulars of the area, population, number of inhabited dwellings, and assets and liabilities of cities and towns and of shires for the years 1919 to 1923 :—

MUNICIPALITIES, QUEENSLAND.—SUMMARY, 1919 TO 1923.

Year.	No.	Area.	Popula- tion.	Number of Inhabited Dwellings.	Capital Value.	Assets.	Liabilities.	
							Government Loans.	Total.

CITIES AND TOWNS.

		sq. miles.	No.	No.	£	£	£	£	
1919	..	35	510	346,019	66,879	17,648,597	2,037,948	304,204	1,667,595
1920	..	35	510	330,044	69,340	19,066,071	2,161,774	457,170	1,867,186
1921	..	36	522	339,420	71,257	19,350,707	2,579,726	506,131	2,081,724
1922	..	36	522	343,799	71,887	19,486,391	2,402,864	540,520	2,251,373
1923	..	36	537	354,187	73,874	20,606,516	2,674,349	589,715	2,540,921

SHIRES.

1919	..	136	669,384	425,855	92,030	46,259,148	625,883	191,551	398,272
1920	..	135	669,384	422,683	95,173	47,259,059	723,871	299,361	513,623
1921	..	134	669,372	423,857	99,364	49,051,635	800,451	338,681	620,180
1922	..	134	669,372	427,739	96,840	50,284,568	846,102	365,863	623,086
1923	..	134	669,627	446,943	98,608	51,041,891	1,037,880	448,390	799,755

(b) *Revenue and Expenditure.* The following table shows the revenue and expenditure (including loan moneys) of cities and towns, and of shires for each year from 1919 to 1923 :—

**MUNICIPALITIES, QUEENSLAND.—REVENUE AND EXPENDITURE,
1919 TO 1923.**

Year.	Revenue.			Expenditure.			
	Rates.	Government Loans and Subsidies.	Total.	Public Works and Services.	Loan Redemp- tion.	Office Expenses and Salaries.	Total.

CITIES AND TOWNS.

		£	£	£	£	£	£	£
1919	..	612,476	45,833	798,473	577,993	20,925	68,585	860,958
1920	..	700,321	180,110	1,024,834	774,969	30,234	76,703	1,074,648
1921	..	791,259	94,453	1,025,504	842,567	32,696	92,194	1,180,420
1922	..	868,996	59,652	1,139,009	960,770	32,892	86,639	1,309,288
1923	..	913,182	77,736	1,492,209	1,057,611*	34,907	87,320	1,432,525

SHIRES.

1919	..	538,769	41,000	690,476	507,506	18,080	97,047	718,018
1920	..	616,025	123,554	860,043	618,287	18,136	110,603	831,807
1921	..	666,951	86,237	844,834	671,997	22,732	134,380	925,953
1922	..	723,478	62,424	933,771	665,229	24,545	119,776	922,811
1923	..	740,433	93,536	1,139,324	879,942*	27,523	126,302	1,141,111

* Including Expenditure on Main Roads.

4. South Australia.—(i) *General*. A large proportion of South Australia is unincorporated, the balance being under municipal corporations in the larger cities and towns, and district councils in outside areas. These bodies are subsidized by Government, and special grants allocated on the recommendation of the Roads Advisory Board are given for the maintenance and construction of main roads.

(ii) *Local Authorities*. (a) *Summary*. During the past five years the number of corporations and district councils has increased by 3, the total being 187, of which 10 corporations and 14 district councils are in the metropolitan area, and 25 corporations and 137 district councils in outside areas. According to the latest available information, there are 955 miles of roads under the control of corporations and about 42,439 miles under the control of district councils, and of these totals, 14½ miles are wood-blocked and 10,529 miles macadamized. The following table gives the area, population, number of occupied dwellings, capital and assessment values and outstanding loans for corporations and district councils separately for the years 1919 to 1923 :—

LOCAL AUTHORITIES, SOUTH AUSTRALIA.—SUMMARY, 1919 TO 1923.

Year.	Area.	Estimated Population.	Occupied Dwellings.	Capital Value.	Assessment Value.	Outstanding Loans.
MUNICIPAL CORPORATIONS.						
	Acres.	No.	No.	£	£	£
1919	53,949	218,932	45,814	42,401,746	2,337,394	343,926
1920	53,949	208,022	45,674	44,106,632	2,300,858	343,643
1921	53,959	214,730	46,782	47,980,109	2,421,920	382,293
1922	59,279	220,559	48,120	51,100,946	2,544,974	439,319
1923	59,279	223,875	49,260	54,983,943	2,759,282	443,893
DISTRICT COUNCILS.						
1919	29,602,382	260,409	57,127	57,503,456	2,829,198	23,836
1920	29,602,382	259,096	57,548	60,184,690	2,938,336	35,797
1921	29,605,269	264,712	57,630	63,510,162	3,160,976	38,131
1922	30,196,509	272,104	59,737	68,293,518	3,429,776	35,358
1923	30,177,455	282,266	62,223	74,949,756	3,747,623	43,848

(b) *Revenue and Expenditure*. The next table gives the revenue and expenditure of corporations and district councils for the years 1919 to 1923, showing in separate columns the receipts and expenditure on main roads. The financial year of municipal corporations ends on the 30th November and that of district councils on the 30th June.

LOCAL AUTHORITIES, SOUTH AUSTRALIA.—REVENUE AND EXPENDITURE, 1919 TO 1923.

Year.	Local Government (exclusive of Government Grants Account).						Government Grants Account (Main Roads).	
	Revenue.			Expenditure.			Revenue.	Expenditure.
	Rates.	Subsidies.	Total.	Roads.	Other Public Works.	Total.		
MUNICIPAL CORPORATIONS.								
1919	£ 215,605	£ 25,280	£ 334,092	£ 114,102	£ 140,457	£ 340,172	£ 14,734	£ 15,408
1920	233,645	27,347	364,200	115,013	163,260	379,709	16,703	17,113
1921	279,992	29,094	420,060	147,129	184,966	444,782	23,927	21,559
1922	315,772	29,328	470,183	185,758	188,756	500,421	33,222	35,364
1923	346,844	34,576	511,078	248,270	204,314	584,005	25,637	22,541
DISTRICT COUNCILS.								
1919	167,161	38,555	249,622	176,056	30,896	270,108	120,790	129,967
1920	180,414	37,730	298,953	179,802	52,891	310,676	128,345	114,891
1921	212,801	43,316	315,166	189,332	40,048	318,614	208,608	180,891
1922	242,591	50,101	356,359	213,557	53,323	361,290	171,756	185,082
1923	277,563	56,281	407,980	222,574	59,380	403,194	217,267	213,615

5. Western Australia.—(i) *General.* In this State there are three forms of local authorities, namely :—(a) municipalities, (b) district road boards, and (c) local boards of health, the two former covering the whole of the State. Local boards of health are of three descriptions, (a) municipal, the members being the same as those of the municipal council of the municipality in which each is situated, (b) those under the control of road boards, and (c) those not under the control of road boards or municipalities. Several of the two latter are inactive. The financial year of municipalities and municipal boards of health terminates on the 31st October, and that of road boards and other local boards of health on the 30th June.

(ii) *Municipalities.* (a) *Summary.* The following table gives the number of municipalities, their area, population, number of dwelling houses, capital value (including improvements), annual value, and length of roads and streets, for the years 1920 to 1924. The figures for 1921 include those for one municipality which was dissolved on the 1st July, 1921, and for the population and number of dwellings in 1920, 1921 and 1922, the census-figures for 4th April, 1921, are given.

MUNICIPALITIES, WESTERN AUSTRALIA.—SUMMARY, 1920 TO 1924.

Year ended 31st Oct.—	Muni- cipalities.	Area.	Population.	Dwelling Houses.	Valuation of Rateable Property.		Length of Roads and Streets.
					Capital Value.	Annual Value.	
	No.	Acres.	No.	No.	£	£	Miles
1920 ..	23	60,911	166,222	35,492	26,280,406	1,550,134	1,135
1921 ..	22	60,911	166,222	34,537	29,947,232	1,673,545	1,140
1922 ..	21	58,981	162,561	35,137	29,492,571	1,710,389	992
1923 ..	21	58,981	172,881	35,498	31,054,031	1,810,173	993
1924 ..	21	58,981	172,427	35,498	32,881,961	1,910,798	994

(b) *Revenue and Expenditure.* The following table gives the revenue and expenditure of municipalities during the years 1919 to 1924 :—

MUNICIPALITIES, WESTERN AUSTRALIA.—REVENUE AND EXPENDITURE, 1920 TO 1924.

Year ended 31st October—	Revenue.				Expenditure.			
	From Rates.	From Govt. Grants.	From other sources.	Total.	Works and Improve- ments.	Disburse- ments in respect of Loans.	Other Expenses.	Total.
	£	£	£	£	£	£	£	£
1920 ..	190,171	1,142	471,859	663,172	95,194	147,396	423,233	665,823
1921 ..	250,356	710	531,589	782,655	132,011	156,123	461,547	749,681
1922 ..	263,008	300	571,394	834,702	180,537	173,038	493,635	847,210
1923 ..	277,993	939	593,937	872,869	202,758	190,738	471,140	864,636
1924 ..	287,863	4,372	738,040	1,030,275	236,050	191,618	599,952	1,027,620

(c) *Assets and Liabilities.* The following table shows the assets and liabilities of municipalities at the 31st October in each financial year 1920 to 1924 :—

MUNICIPALITIES, WESTERN AUSTRALIA.—ASSETS AND LIABILITIES, 1920 TO 1924.

Year ended 31st October—	Assets.				Liabilities.	
	Balance in Hand.	Value of Property.	Accrued Sinking Funds.	Total.	Outstanding Debts and Bonds.	Total.
	£	£	£	£	£	£
1920 ..	36,087	1,456,109	385,692	2,011,498	1,745,908	1,836,596
1921 ..	64,687	1,514,671	409,879	2,089,501	1,782,471	1,890,307
1922 ..	45,461	1,533,276	412,578	2,100,799	1,767,562	1,857,490
1923 ..	48,580	1,574,805	477,016	2,121,099	1,802,782	1,894,126
1924 ..	51,460	1,570,010	449,007	2,193,487	1,864,993	1,961,763

(iii) *District Road Boards. (a) Summary.* In the table hereunder the unimproved values given are approximate, allowance being made for three districts for which the annual values only are available. In other instances the annual value is also given, and those portions of districts rated under the annual value are not included in the area rated under the unimproved capital value. The population at the date of the census of 4th April, 1921, was 160,970, and the number of dwellings 41,662.

On the 30th June, 1924, the population was estimated at 188,640, and the number of dwelling-houses at 45,540. Forty-two districts, however, only give figures at time of the 1921 census.

DISTRICT ROAD BOARDS, WESTERN AUSTRALIA.—SUMMARY, 1920 TO 1924.

Year ended 30th June—	Number of Road Districts.	Area.	Unimproved Capital Value (Approximate).	Length of Roads in Existence.	Assets.	Liabilities.	Out- standing Loans.
	No.	sq. miles.	£	miles.	£	£	£
1920 ..	118	975,820	14,553,000	34,631	280,066	191,823	140,185
1921 ..	119	975,820	14,547,000	36,506	307,521	219,660	154,411
1922 ..	121	975,828	15,088,027	37,238	356,270	286,423	172,984
1923 ..	121	975,828	16,175,944	38,907	379,649	292,915	210,755
1924 ..	122	975,828	16,202,890	39,863	418,060	348,690	242,043

(b) *Revenue and Expenditure.* The revenue and expenditure of district road boards are shown in the following table for the years 1920 to 1924:—

DISTRICT ROAD BOARDS, WESTERN AUSTRALIA.—REVENUE AND EXPENDITURE, 1920 TO 1924.

Year ended 30th June—	Revenue.				Expenditure.			
	Rates.	Government Grants.	Other.	Total.	Adminis- tration.	Works.	Other.	Total.
	£	£	£	£	£	£	£	£
1920 ..	135,644	53,234	68,902	257,780	31,722	152,172	59,471	243,365
1921 ..	149,904	39,172	85,659	274,735	36,891	179,317	63,008	285,216
1922 ..	166,161	35,976	87,182	289,319	38,348	185,477	83,326	307,151
1923 ..	193,018	56,518	120,202	369,738	38,704	203,267	105,315	347,286
1924 ..	213,848	74,184	146,743	434,775	44,233	288,014	113,604	445,851

(iv) *Local Boards of Health. (a) General.* On the 31st October, 1924, there were twenty-one local boards of health within municipalities, and on the 30th June, 1924, seventy-six under control of road boards, and twenty-five extra-municipal boards. Of the latter, three under the control of road boards and four extra-municipal boards were inactive during the year.

(b) *Finances.* The following table shows the number of boards, their revenue and expenditure, and the assets and liabilities of such as were active from 1920 to 1924. As already stated, the financial year of municipal boards ends on the 31st October, and that of other boards on the 30th June.

LOCAL BOARDS OF HEALTH, WESTERN AUSTRALIA.—FINANCES, 1920 TO 1924.

Year.	Number.	Revenue.			Expenditure.		Assets.	Liabilities
		Rates.	Sanitary Charges and Rubbish Fees.	Total.	Sanitary and Rubbish Service.	Total.		
		£	£	£	£	£	£	£
1920..	124	49,012	52,775	123,645	82,856	122,575	78,938	16,944
1921..	126	57,194	63,484	133,021	89,709	131,400	83,875	20,872
1922..	126	56,362	65,786	133,280	87,479	129,941	85,768	17,689
1923..	125	56,523	70,700	140,056	89,430	133,191	88,456	16,192
1924..	122	60,255	66,378	137,047	92,324	136,099	89,311	16,549

6. Tasmania.—(i) *General.* The whole State, with the exception of the cities of Hobart and Launceston, which were incorporated under separate Acts, is divided into municipal districts.

(ii) *Municipalities.* (a) *Summary.* The following table gives the number of municipalities, valuations, outstanding loans and length of roads for the years 1919 to 1923. The latest available figures for inhabited dwellings is for the year 1921, when the number was 45,950.

MUNICIPALITIES, TASMANIA.—SUMMARY, 1919 TO 1923.

Year.	Number of Municipalities.	Valuations.			Outstanding Loans.	Length of Roads.
		Annual Value.	Unimproved Value.	Total Capital Value.		

HOBART AND LAUNCESTON.

	No.	£	£	£	£	Miles.
1919	2	654,184	5,215,895	11,315,593	1,592,631	176
1920	2	688,290	5,435,180	11,902,005	1,637,550	178
1921	2	771,297	5,768,348	13,112,954	1,700,128	178
1922	2	784,945	6,139,362	14,123,587	1,924,252	179
1923	2	887,583	6,388,152	15,140,686	2,017,691	187

COUNTRY MUNICIPALITIES.

1919	47	1,218,152	13,434,415	25,805,735	337,020	11,219
1920	47	1,246,500	13,899,687	26,834,221	345,963	11,461
1921	47	1,347,839	14,670,035	28,436,345	534,127	11,563
1922	47	1,396,941	14,735,436	29,034,047	407,719	11,557
1923	47	1,423,174	15,168,896	30,318,877	417,535	11,725

(b) *Revenue and Expenditure.* The following table gives the revenue and expenditure of all municipalities for the years 1919 to 1923 :—

MUNICIPALITIES, TASMANIA.—REVENUE AND EXPENDITURE, 1919 TO 1923.

Year.	Revenue.			Expenditure.			
	Rates.	Government Grants.	Total.	Adminis- tration.	Works and Services.	Interest and Sinking Fund.	Total.

HOBART AND LAUNCESTON.

	£	£	£	£	£	£	£
1919 ..	125,043	1,250	354,126	12,900*	234,345	103,764	355,999
1920 ..	125,620	1,347	533,235	14,620*	279,462	266,163	560,245
1921 ..	159,094	250	626,855	24,579*	285,904	97,237	408,944
1922 ..	178,921	2,056	577,707	29,491*	403,555	110,716	544,133
1923 ..	234,313	1,263	641,070	28,361*	336,961	125,297	613,380

* Hobart only (Launceston figures not available).

COUNTRY MUNICIPALITIES.

	£	£	£	£	£	£	£
1919 ..	115,618	32,717	224,760	26,438	163,756	21,476	229,492
1920 ..	129,812	27,725	223,825	31,311	140,648	23,087	209,815
1921 ..	144,531	27,889	261,162	35,798	167,870	22,797	248,468
1922 ..	156,408	30,694	269,388	36,038	193,188	24,248	270,386
1923 ..	167,616	26,026	267,674	36,003	181,087	28,438	264,395

7. *Northern Territory.*—(i) *Municipality of Darwin.* The following particulars relate to the year 1923–24 :—Area 2,024 acres, population 1,000, number of occupied dwellings 200, of unoccupied dwellings 30, and of other buildings 130. Revenue from general rates £1,686, from Government grants £818, other sources £567, total £3,071 ; expenditure £2,914.

(ii) *Bagot Road District.* During the year 1923–24 the receipts amounted to £251, and the expenditure to £641, leaving (with a balance of £660 brought forward from the previous year) a balance in hand of £270.

8. *Basis for Municipal Rating and Limits for Rates.*—These matters were dealt with at some length in Official Year Book, No. 17, pp. 124–25, but limitations of space preclude their repetition in the present issue.

§ 4. Summary of Municipal Finance.

1. *General.* In the preceding parts of this chapter certain particulars have been given regarding local authorities in each individual State. In this paragraph comparative figures are given for each State regarding the financial operations of the local governing bodies referred to in § 3. The particulars in the next two tables refer to financial years as follows :—New South Wales : calendar year 1923. Victoria : 30th September, 1923, except Melbourne, 31st December, and Geelong, 31st August, 1923. Queensland : calendar year 1923. South Australia : Corporations, 30th November, and district councils, 30th June, 1923. Western Australia : Municipalities, 31st October, 1923, district road boards, 30th June, 1923. Tasmania : calendar year 1923.

2. Number, Revenue, Expenditure, and Valuation of Local Authorities.—The following table shows the number, revenue, expenditure, and valuation of local authorities in each State and in Australia during the years indicated above. It should be noted that, excepting in Tasmania, the metropolitan water supply systems are not under municipal control; the particulars given of revenue and expenditure for the five States other than Tasmania do not, therefore, include revenue and expenditure on account of these systems.

LOCAL AUTHORITIES IN EACH STATE.—FINANCIAL SUMMARY, 1923.

Particulars	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Total.
No. of local authorities	320	192	170	187	142	49	1,060

RECEIPTS.

	£	£	£	£	£	£	£
Rates—							
General ..		2,559,847	1,184,986	624,407	368,161	141,556	
Other ..		438,735	462,629		102,850	260,373	
Government grants, &c. ..	7,830,432	60,607	4,297	283,804	57,457	27,289	18,264,201
Loans and other sources ..		1,429,734	973,621	253,751	714,139	479,526	
Total ..	7,830,432	4,488,923	2,631,533	1,161,962	1,242,607	908,744	18,264,201

EXPENDITURE.

Works, services, etc.		2,934,819	1,937,553	962,382	806,164	518,048	
Interest on loans and overdrafts		343,164	50,483	24,427	96,551	126,013	
Redemptions, sinking funds, etc. ..	7,594,855	165,675	62,430	26,818	115,703	27,722	17,697,232
Administration ..		340,319	213,622	110,325	98,130	64,364	
Other ..		431,712	309,548	99,403	95,374	141,628	
Total ..	7,594,855	4,215,689	2,573,636	1,223,355	1,211,922	877,775	17,697,232

VALUATIONS.

Capital value of property ..	2,272,533,451	499,967,961	71,648,407	129,933,699	47,229,975	43,157,634	(b)
Annual value of property ..	(b)	26,780,419	(b)	6,506,905	4,810,173	2,181,886	(b)

(a) Unimproved capital value of all ratable property. (b) Not available. (c) The valuation of road districts is the unimproved capital value. (d) Excluding district road boards.

3. Local Government Loans, 1923.—The following table shows the amount of loans raised by local authorities during the year 1923, of loans current at the end of that year, of liability on account of interest and sinking fund, and of loans redeemed during 1923 :—

LOCAL AUTHORITIES.—LOANS, 1923.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Total.
	£	£	£	£	£	£	£
Loans raised during year ..	1,870,466	1,093,858	462,024	50,743	98,599	191,388	3,767,078
Loans current at end of year	13,955,161	6,601,731	2,538,976	487,741	2,013,536	2,435,226	28,032,371
Annual liability on account of interest ..	655,934	(b) 334,000	(c) 50,603	24,888	97,149	146,314	(a)
Total sinking fund at end of year ..	1,362,124	456,436	168,343	23,626	439,761	297,577	2,747,867
Amount of loans redeemed during year ..	(a)	(a)	(c) 62,430	38,675	48,461	85,783	(a)

(a) Not available. (b) Approximate. (c) Government loans only.

§ 5. Water Supply, Sewerage and Drainage.

1. New South Wales.—(i) *General*. In Sydney and its suburbs, the water supply and sewerage systems are controlled by the Metropolitan Board of Water Supply and Sewerage, and in Newcastle and its suburbs by the Hunter District Water Supply and Sewerage Board. In country districts, both waterworks and sewerage works are constructed by the Public Works Department, and, when completed, handed over to the municipalities affected, by which the cost must be repaid.

(ii) *Metropolitan Waterworks*. (a) *General*. During the year ended 30th June, 1924, the mileage of water mains laid was 127 miles, being equal to the length laid in the preceding year, making the total length in sizes from 3 inches to 72 inches in diameter, 3,211 miles. An additional storage of 150,000,000 gallons at Potts Hill was completed by 31st December, 1923. In 1923, the supply to the city was improved by the installation of a pump to boost 14,000,000 gallons per day through the 36-in. western suburbs main. In 1924, 234 miles of mains were cleaned out during the year, greatly improving the flow. Important amplification works are in process of construction.

(b) *Water Supplied, etc.* The following table gives the number of houses and estimated population supplied, and other details for the years 1920 to 1924 :—

WATERWORKS, SYDNEY.—WATER SUPPLIED, 1920 TO 1924.

Year ended 30th June—	Number of Houses. Supplied.	Estimated Population Supplied.	Average Daily Supply.	Total Supply for the Year.	Average Daily Supply.		Mains Laid.
					Per House.	Per Head of Estimated Population.	
	No.	No.	1,000 Gallons.	1,000 Gallons.	Gallons.	Gallons.	Miles.
1920 ..	212,046	1,060,230	48,021	17,527,753	226	45.29	142
1921 ..	221,886	1,109,430	48,496	17,701,000	218	43.71	128
1922 ..	229,274	1,146,370	51,002	18,616,000	222	44.49	118
1923 ..	239,528	1,197,640	56,595	20,657,319	236	47.26	126
1924 ..	250,804	1,254,020	58,628	21,458,036	234	46.78	126

(c) *Finances*. The next table gives details of the finances for the years 1920 to 1924 :—

WATERWORKS, SYDNEY.—FINANCES, 1920 TO 1924.

Year ended 30th June—	Revenue.	Working Expenses.	Capital Cost, exclusive of Items on which Interest is not charged.	Percentage of Working Expenses on Revenue.	Percentage of Revenue on Capital Cost.	Interest Payable on Capital Cost.	Net Profit after Paying Working Expenses and Interest.
	£	£	£	%	%	£	£
1920 ..	664,975	291,618	9,584,723	43.85	6.93	433,170	—59,813
1921 ..	855,751	347,298	10,323,252	40.58	8.28	473,889	34,564
1922 ..	923,798	376,203	11,130,857	40.72	8.30	543,164	4,431
1923 ..	992,702	363,102	12,019,600	36.58	8.26	597,351	32,249
1924 ..	1,105,098	380,407	13,094,176	34.42	8.43	648,011	76,680

NOTE.—The minus sign (—) signifies loss.

(iii) *Metropolitan Sewerage Systems.* (a) *General.* In addition to the usual progress made in connecting additional houses, 40 miles of new sewers were laid, the total length now being 1,314 miles. The quantity of sewage pumped was 3,970 million gallons.

(b) *Houses Drained, Population Served, Length of Sewers, etc.* The subjoined table gives the number of houses drained, the estimated population served, the length of sewers and stormwater drains, the length of ventilating shafts erected, and the length of sewers ventilated for the years 1920 to 1924 :—

SEWERAGE SYSTEMS, SYDNEY.—PARTICULARS OF SERVICES, 1920 TO 1924.

Year ended 30th June—	Number of Houses Drained.	Estimated Population Served.	Total Length of Sewers.	Total Length of Storm-water Drains.	Ventilating Shafts Erected.	Sewers Ventilated.
	No.	No.	Miles.	Miles.	Feet.	Miles.
1920	145,304	726,520	1,161.94	63.73	503,362	1,052
1921	148,923	744,615	1,196.96	63.73	514,536	1,096
1922	153,789	768,945	1,226.96	63.73	527,766	1,122
1923	159,390	796,950	1,273.71	65.70	532,470	1,162
1924	165,215	826,075	1,313.90	65.96	543,306	1,208

(c) *Finances.* The following table shows the revenue, working expenses, capital cost, interest, etc., for the sewerage branch of the Metropolitan Board of Water Supply and Sewerage for the years 1920 to 1924 :—

SEWERAGE SYSTEMS, SYDNEY.—FINANCES, 1920 TO 1924.

Year ended 30th June—	Revenue.	Working Expenses.	Capital Cost, exclusive of Items on which Interest is not charged.	Percentage of Working Expenses on Revenue.	Percentage of Revenue on Capital Cost.	Interest Payable on Capital Cost.	Profit or Loss after Payment of Working Expenses and Interest.
	£	£	£	£	%	£	£
1920 ..	512,621	202,360	7,124,813	39.47	7.26	328,239	—17,978
1921 ..	615,615	229,441	7,329,632	37.27	8.39	341,674	44,500
1922 ..	683,434	244,916	7,553,906	35.83	9.05	373,671	64,847
1923 ..	661,964	231,672	7,857,504	34.99	8.42	395,152	35,140
1924 ..	756,539	244,480	8,145,061	32.31	9.28	409,721	102,338

NOTE.—The minus sign (—) represents a loss.

(iv) *Newcastle Water Supply.* (a) *General.* No works of great importance were completed during the year ended 30th June, 1924, but 20 miles of water mains were laid, bringing the total up to 526 miles. The construction of the Chichester River pipe-line has been completed, and it is anticipated the Chichester dam will be completed in 1925.

(b) *Particulars of Services.* The following table gives the average daily supply of water, the total quantity pumped during the year, and the number of houses and population supplied for the years 1920 to 1924 :—

NEWCASTLE WATER SUPPLY.—SUMMARY, 1920 TO 1924.

Year ended 30th June—	Number of Houses Supplied.	Estimated Population Supplied.	Average Daily Supply.	Total Quantity Pumped for the Year.	Average Daily Supply.		Mains Laid.
					Per House.	Per Head of Estimated Population.	
	No.	No.	1,000 gallons.	1,000 gallons.	Gallons.	Gallons.	Miles.
1920 ..	24,864	124,320	4,319	1,580,906	174	34.74	11
1921 ..	25,874	129,370	4,688	1,711,187	181	36.23	14
1922 ..	26,758	133,790	4,626	1,688,537	173	34.57	13
1923 ..	28,036	140,180	4,806	1,754,417	171	34.28	29
1924 ..	29,568	147,840	5,756	2,106,614	195	38.92	21

(c) *Finances.* The next table gives the revenue, working expenses, capital debt, and net profit for the years 1920 to 1924 :—

NEWCASTLE WATER SUPPLY.—FINANCES, 1920 TO 1924.

Year ended 30th June—	Revenue.	Working Expenses.	Capital Debt.	Percentage of Working Expenses on Revenue.	Percentage of Revenue on Capital Debt.	Interest and Sinking Fund.	Profit or Loss after Paying Working Expenses, Interest, and Sinking Fund.
	£	£	£	%	%	£	£
1920 ..	97,469	45,516	973,512	46.70	10.01	42,972	8,981
1921 ..	116,320	59,895	1,379,427	51.49	8.43	46,299	10,126
1922 ..	113,217	63,736	1,819,534	56.29	6.22	50,785	— 1,304
1923 ..	110,076	62,155	2,271,295	56.47	4.85	54,682	— 6,761
1924 ..	143,138	63,883	2,730,003	44.63	5.24	58,701	20,554

NOTE.—The minus sign (—) represents loss.

The capital debt in respect of water supply set down as £2,730,003 includes expenditure amounting to £1,806,825 on the incomplete Chichester Scheme, which was not vested in the Board at 30th June, 1924. The capital expenditure in respect of transferred works is £923,177. The percentage of revenue on transferred (and, therefore, revenue-producing) works is 15.55 per cent. as against 5.24 per cent. on total debt.

(v) *Newcastle Sewerage Works.* (a) *General.* The sewerage works for Newcastle and suburbs as originally designed have been completed by the Department of Public Works as the constructing authority and vested in the Board.

The amplification, extension, and improvement of such sewerage works have been referred to an Engineering Experts Committee for investigation and report.

This Committee is also inquiring into the question of the amplification, extension, and improvement of the stormwater drainage works of the Newcastle District.

(b) *Sewerage Connexions and Length of Sewers.* During the year ended 30th June, 1924, the number of properties connected with sewers was 1,281, making a total of 15,606. New sewers of a total length of 6 miles were constructed by the Board, bringing the total length of sewers under the Board's control to 166 miles.

(c) *Finances.* Particulars are given in the following table of revenue, working expenses, capital debt, interest, and profit or loss of the sewerage branch of the Board for the years 1920 to 1924 :—

NEWCASTLE SEWERAGE.—FINANCES, 1920 TO 1924.

Year ended 30th June—	Revenue.	Working Expenses.	Capital Debt.	Percentage of Working Expenses on Revenue.	Percentage of Revenue on Capital Debt.	Interest and Sinking Fund.	Loss after Paying Working Expenses, Interest, and Sinking Fund.
	£	£	£	%	%	£	£
1920 ..	28,050	12,734	518,804	45.40	5.41	27,892	12,576
1921 ..	32,164	16,007	555,513	49.77	5.79	30,577	14,420
1922 ..	39,477	18,863	577,833	47.78	6.83	34,446	13,832
1923 ..	49,551	19,692	592,148	39.74	8.37	36,172	6,313
1924 ..	56,210	21,915	610,849	38.99	9.202	37,083	2,788

(vi) *Water Supply and Sewerage in Country Towns.* (a) *General.* Under the Local Government Act of 1919, the Public Works Department may, upon application by any municipal council, construct, out of moneys voted by Parliament therefor, waterworks and sewerage works, and when completed transfer the control thereof to the council. The cost must be repaid in instalments, with interest fixed by the Governor, spread over a period not exceeding one hundred years.

(b) *Waterworks.* Up to the 30th June, 1924, waterworks had been completed in 63 towns and handed over to the respective municipal or shire councils, with the exception of the Junee Water Supply, which has been placed under special administration, and the Grafton Water Supply, which is vested in a Board composed of three members of the Grafton council and three members of the South Grafton council. The capital debt of all waterworks on the date mentioned was £1,729,972, and the annual amount payable in instalments and for interest was £74,751. The water supply of Broken Hill, on which loan expenditure to the amount of £481,795 was incurred, was constructed under a special Act, and the undertaking is administered by the Minister for Public Works. A few municipalities have also constructed waterworks out of their own resources.

(c) *Sewerage Works.* Sewerage and storm-water drainage works were completed in twenty municipalities at the 30th June, 1924. The capital debt thereon amounted to £537,069, and the amount payable annually in instalments and for interest to £24,143.

2. *Victoria.*—(i) *A. The Melbourne and Metropolitan Board of Works.* (a) *General.* All land within thirteen miles of the General Post Office is included within the metropolitan area for water supply and sewerage purposes. This area covers 434 square miles of land area, and in 1924 embraced 21 cities, two towns and part of another, and parts of 13 shires, or a total of 37 municipalities or portions thereof. The whole of the town of Mordialloc and of the Shire of Moorabbin are included in the metropolis for water supply purposes, and the Board is also empowered to supply water to certain municipalities outside the thirteen-mile radius to the Metropolitan Farm at Werribee, the outfall-sewer area, and elsewhere. Various other shires also arrange for bulk supplies of water. The liability on the 30th June, 1924, for loans raised by the Board, was £14,502,036. The Board is still empowered to borrow £2,137,898 before reaching the limit of its borrowing powers.

(b) *Revenue and Expenditure.* The following table shows the actual receipts and expenditure, and the loan receipts and expenditure of the Board from 1919-20 to 1923-24 :—

**WATER SUPPLY AND SEWERAGE, MELBOURNE.—REVENUE AND
EXPENDITURE, 1919-20 TO 1923-24.**

Particulars.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
ORDINARY RECEIPTS.					
	£	£	£	£	£
Water supply	394,007	419,474	446,875	500,671	545,835
Sewerage, etc.	396,718	404,234	454,521	542,698	472,074
Live stock—Metropolitan farm ..	53,051	43,975	19,994	42,045	85,059
Interest { Water supply	1,707	1,021	1,917	4,587	12,427
{ Sewerage	9,509	8,737	8,477	11,306	11,190
Total	854,992	877,441	931,784	1,101,307	1,126,585
ORDINARY EXPENDITURE.					
General management	51,259	59,420	65,612	64,027	68,803
Live stock, etc.—Metropolitan farm	60,851	68,742	53,162	46,632	101,311
Maintenance { Water supply	60,362	67,131	62,919	65,551	81,991
{ Sewerage	62,149	78,037	74,861	60,548	74,459
Interest { Water supply	147,750	156,645	179,034	203,569	238,572
{ Sewerage	362,886	369,204	411,828	430,418	441,567
War expenditure: Safeguarding works, etc.	1,195	..	..	..	..
Patriotic, Relief Funds, etc. ..	100	104	80	10	..
Sinking fund investment	5,036	4,813	..	..	..
Pensions and Compensation Al- lowances .. ..	..	..	6,007	5,756	5,562
Total	751,588	804,096	853,503	876,511	1,012,265

WATER SUPPLY AND SEWERAGE, MELBOURNE.—REVENUE AND EXPENDITURE, 1919-20 TO 1923-24—*continued*.

Particulars.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
LOAN RECEIPTS.					
	£	£	£	£	£
Water supply	4,712	7,016	11,748	19,074	18,588
Sewerage	53,973	47,769	46,120	61,959	61,992
Proceeds of loans	543,853	543,616	1,573,326	749,410	1,260,716
Miscellaneous	4,351	3,196	17,497	25,978	21,875
Total	606,889	601,597	1,648,691	856,421	1,363,171

LOAN EXPENDITURE.					
	£	£	£	£	£
Water supply construction	55,937	119,744	316,329	297,365	348,483
Sewerage construction	205,516	257,240	300,818	351,006	425,653
Renewals, main outfall .. ..	..	..	..	2,280	1,654
Cleaning rising main .. ..	..	..	..	..	1,156
Expenses in floating and redemption of loans	249,617	378,820	1,111,814	80,840	954,774
Miscellaneous	27,622	46,478	82,222	49,911	106,081
Total	538,692	802,282	1,811,183	781,402	1,837,801

B. *Melbourne Water Supply.* (a) *Progress of Work.* The principal works completed or in hand during the year ended 30th June, 1924, were:—Clearing site of Maroondah Dam; construction of Maroondah Dam (upper portion) and outlet tower; manufacture of 6-ft. diameter pipes and 30-in. valves for Maroondah Dam; clearing site for O'Shanassy Dam; construction of O'Shanassy Dam; completion of Mitcham reservoir and 2,306 lineal feet of 18-in. reinforced concrete pipes for outlet scour; raising lining of O'Shanassy aqueduct, 36,497 lineal feet; laying 4 miles 3 chains of 18-in. steel main to Moorabbin; laying 8 miles 77 chains of electrically welded steel main from Morang to Broadmeadows; laying 75 miles 42 chains of water supply reticulation under 12 inches diameter; cleaning 70 miles 51 chains of water mains.

(b) *Quantity of Water, Number of Houses, and Population Supplied.* The following table gives various particulars for the years 1920 to 1924. The rate levied over the period has remained at sixpence in the pound.

WATER SUPPLY, MELBOURNE.—PARTICULARS OF SERVICES, 1920 TO 1924.

Year ended 30th June—	Number of Houses Supplied. (a)	Estimated Population Supplied. (a)	Average Daily Consumption.	Total Water Consumption for the Year.	Average Daily Consumption.		Length of Mains, Reticulation, etc.
					Per House.	Per Head of Estimated Population.	
	No.	No.	1,000 Gallons.	1,000 Gallons.	Gallons.	Gallons.	Miles.
1920 ..	167,798	743,345	44,360	16,235,587	264.4	59.7	1,723
1921 ..	174,274	771,348	46,772	17,071,857	268.4	60.6	1,783
1922 ..	181,226	802,144	47,661	17,396,103	263.0	59.4	1,857
1923 ..	190,108	842,179	51,206	18,690,114	269.3	60.8	1,931
1924 ..	201,548	892,858	47,642	17,436,949	236.4	53.4	2,011

(a) 31st December of previous year.

(c) *Capital Cost, Revenue, Expenditure and Surplus.* The following table shows the total cost of construction, revenue, working expenses (exclusive of renewals and special war expenditure), interest and surplus for the five years ending 30th June, 1924, together with the total amounts to that date :—

WATER SUPPLY, MELBOURNE.—FINANCES, 1920 TO 1924.

Year ended 30th June—	Capital Cost.	Revenue.	Working Expenses.	Percentage of Working Expenses on Revenue.	Interest.	Surplus.
	£	£	£	%	£	£
1920	47,251	398,173	a 62,941	15.80	b 156,588	178,644
1921	112,025	407,093	a 78,755	19.34	b 173,550	154,788
1922	310,578	438,399	a 86,925	19.82	b 196,746	154,728
1923	285,352	507,475	a 85,407	16.83	b 217,723	204,345
1924	314,521	524,165	a 86,853	16.57	b 247,883	189,429
Total to date ..	5,990,793	11,771,796	2,023,795	17.19	5,112,132	4,635,869

(a) Exclusive of Renewals.

(b) Includes Interest on Renewals and Sinking Funds.

C. *Melbourne Sewerage.* (a) *Progress of Work. By Contract.* Of the seven remaining steam pumps at the Pumping Station, Spotswood, only one at a time is now in constant daily operation under normal conditions. Except for peak loads, pumping during the year ended 30th June, 1924, has been done by two electrical units of 18 million gallons per day capacity operated by 25-cycle energy supplied from Newport "A" Power Station. The reduction in cost of pumping is considerable. Contracts for supply of further electrical centrifugal pumps, viz., (a) two of a capacity of 12 million gallons per day, and (b) one of 18 million gallons per day capacity, were practically completed. These new pumps will be operated by 50-cycle current supplied from Newport "B" Generating Station. The necessary 50-cycle sub-station with all transformer and switch gear has been completed. The low tension bus bars and switch gear were manufactured and erected by the Board's staff, who also laid and connected up the low tension cables from the sub-station to the various wells. One main and five branch sewers were completed; twenty-three reticulation areas and 61 minor reticulation extensions were also completed, while eight reticulation areas and four minor reticulation extensions were in progress. *By Day Labour.* One reticulation area was completed, also 219 minor reticulation extensions, 3,391 branches and short pieces of reticulation, and 17 alterations, while one branch sewer and one reticulation area were in progress. At 30th June, 1924, there were 25 separate contracts and day labour jobs in progress, ranging in cost from £100 to £17,176.

(b) *Number of Houses Connected, etc.* The following table gives the number of houses connected, the estimated population served, the total length of sewers, and the number of gallons of sewage pumped for the years 1920 to 1924 :—

SEWERAGE, MELBOURNE.—PARTICULARS OF SERVICES, 1920 TO 1924.

Year ended 30th June—	Number of Houses for which Sewers are Provided. (a)	Estimated Population for which Sewers are Provided. (a)	Average Daily Pumping. 1,000 Gallons.	Total Sewage Pumped for the Year. 1,000 Gallons.	Average Daily Pumping.		Length of Sewers, etc. Miles.
					Per House. Gallons.	Per Head of Estimated Population. Gallons.	
1920 ..	156,987	695,450	34,361	12,576,051	218.9	49.4	1,705
1921 ..	160,345	710,328	37,846	13,813,897	236.0	53.3	1,733
1922 ..	164,413	728,350	39,236	14,320,960	238.6	53.9	1,774
1923 ..	171,125	758,084	36,335	13,262,326	212.3	47.9	1,812
1924 ..	179,183	793,781	35,750	13,084,370	199.5	45.0	1,861

(a) 31st December of previous year.

(c) *Finances.* The capital cost, revenue, working expenses (exclusive of renewals), percentage of working expenses on revenue, interest and deficiency for the years 1920 to 1924 are given below :—

SEWERAGE, MELBOURNE.—FINANCES, 1920 TO 1924.

Year ended 30th June—	Capital Cost.	Revenue.	Working Expenses.	Percentage of Working Expenses on Revenue.	Interest.	Deficiency.
	£	£	£	%	£	£
1920	158,288	409,057	a 95,287	23.29	b 373,925	60,155
1921	203,324	411,177	a 119,304	29.01	b 378,023	86,150
1922	242,220	441,516	a 121,045	27.41	b 422,295	101,824
1923	263,050	552,643	a 116,804	21.14	b 438,577	2,738
1924	337,740	480,748	a 119,571	24.87	b 451,168	89,991
Total to date	8,923,580	7,393,742	1,735,951	23.48	7,904,023	2,246,232

(a) Exclusive of Renewals. (b) Includes interest on Renewals and Sinking Funds.

(d) *Metropolitan Sewerage Farm.* On 30th June, 1924, the total area of the farm was 13,601 acres. The following table gives the capital cost, revenue, working expenses (exclusive of renewals), interest net cost of sewage purification, and trading profit for the years 1920 to 1924 :—

METROPOLITAN SEWAGE FARM.—FINANCES, 1920 TO 1924.

Year ended 30th June—	Capital Cost.	Revenue.	Working Expenses.	Interest.	Net cost of Sewage Purification.	Trading Profit.
	£	£	£	£	£	£
1920	8,099	46,921	c18,296	22,964	(a) 5,661	41,061
1921	21,245	22,925	c22,744	23,550	23,369	15,750
1922	12,472	2,993	c23,588	28,711	49,306	(b) 4,837
1923	28,654	20,282	c26,441	29,744	35,903	11,285
1924	36,081	28,903	c26,786	31,995	29,878	19,968
Total to date ..	676,591	528,008	289,960	564,877	292,915	293,240

(a) Profit.

(b) Loss.

(c) Exclusive of Renewals.

(ii) *Geelong Waterworks and Sewerage Trust.* (a) *General.* The Geelong Waterworks and Sewerage Trust, constituted in 1908, consists of five commissioners, two of whom represent the city of Geelong, one the town of Geelong West, one the borough of Newtown and Chilwell, and one the shires of Bellarine, Corio and South Barwon. The amount of loan money which may be raised is limited to £725,000 for water supply undertaking, £610,000 for sewerage undertaking, and £200,000 for sewerage installations to properties under the deferred payment system. The population supplied is about 38,000.

(b) *Water Supply.* The catchment area is about 16,000 acres. The works comprise the Korweinguboorra Reservoir and the Bolwarra Weir on Eastern Moorabool River, together with the necessary channels, mains and reservoirs. The storage capacity of all the reservoirs is 2,709,835,280 gallons, and there are 204½ miles of reticulation mains within the city of Geelong and its suburbs. The total expenditure on waterworks to the 30th June, 1924, was £487,222, and the revenue for the year 1923–24 was £42,294.

(c) *Sewerage Works.* The sewerage scheme consists of a main outfall sewer to the ocean at Black Rock, about 9 miles from Geelong, and 90.4 miles of reticulation mains have already been laid. The drainage area is 8,081 acres, and the number of buildings within the drainage area is 9,000 and within the sewered areas 8,222, while 7,203 buildings have been connected with the sewers. Up to the 30th June, 1924, the total expenditure on sewerage works was £451,328 and on the cost of sewerage installations under deferred payment conditions £159,338. The revenue amounted to £35,824.

(iii) *Bendigo Sewerage Authority.* The members of the Bendigo City Council constitute this Authority. The sewerage district comprises the whole area of the city of Bendigo. The works, when completed, are estimated to cost £250,000, and comprise treatment works consisting of—(a) Non-septic liquefying tanks and oxidizing chambers,

without filters, but with land disposal of effluent for irrigating grass and crops; (b) Main outfall sewer, main, sub-main, branch, and reticulation sewers, of which over 23½ miles had been constructed by the end of February, 1925, at which date 1,000 premises had been connected to sewers. An unique feature of the scheme is the entire omission of the "boundary trap" from house sewers with resulting omission of "induct vent" to house sewers and the omission of all ventilation on street sewers, the main and reticulation sewers all being amply ventilated by the house sewer ventilation, while the resulting all round saving both of first cost and maintenance is considerable. Expenditure to end of February, 1925, was £188,000.

(iv) *Water Supply in Country Towns and Districts.* Most of the country waterworks are controlled by the State Rivers and Water Supply Commission, but a number of other waterworks are controlled by Waterworks Trusts or by municipal corporations.

The following table gives particulars regarding waterworks under the control of trusts and municipal corporations for the years 1920 to 1924 :—

COUNTRY WATERWORKS, VICTORIA.—FINANCES, 1920 TO 1924.

Year.	Under Waterworks Trusts.				Under Municipal Corporations.			
	Number of Trusts.	Capital Cost.	Capital Indebtedness.	Current Interest Outstanding.	Number of Corporations.	Capital Cost.	Capital Indebtedness.	Current Interest Outstanding.
	No.	£	£	£	No.	£	£	£
1920 ..	98	1,189,259	892,222	14,970	29	782,115	515,364	10,614
1921 ..	98	1,215,526	905,842	10,171	29	784,465	512,185	2,300
1922 ..	98	1,256,973	936,112	11,342	29	785,602	509,358	1,590
1923 ..	98	1,278,847	949,510	15,178	29	785,602	506,475	3,152
1924 ..	99	1,322,315	983,663	13,712	29	785,602	503,890	9,811

3. Queensland.—(i) The Metropolitan Water Supply and Sewerage Board, Brisbane.

(a) *General.* Since the filtration works on Holt's Hill were put into operation, the whole of the water supply in the metropolitan area is filtered. There are ten filters in operation and an additional one is approaching completion. The service reservoirs on Bartley's Hill, Highgate Hill, Wickham Terrace, and Tarragindi Hill have a total capacity of about 21,000,000 gallons. The 42-in. trunk main, commenced in July, 1923, is nearing completion, and a portion of it is in operation. The Board is also constructing a 36-in. trunk main from Kenmore to Tarragindi Hill Reservoir. The additional pumping plant is well in hand, and the contractors have commenced the erection of the necessary pumping machinery. The Board has in contemplation further extensive works, viz. :—Combining Gold Creek and Enoggera Reservoir waters with the object of increasing the supply into certain districts, and the building of a reservoir on Eildon Hill together with new 24-in. trunk main and other distributing mains.

(b) *Brisbane Waterworks. Summary.* The following table gives a summary of operations for the last five years :—

WATERWORKS, BRISBANE.—SUMMARY, 1920 TO 1924.

Year.	Length of Reticulation Mains.	Number of Tenements Connected.	Estimated Population Supplied.	Quantity Supplied.	Average Daily Supply.	Average Daily Supply per Head of Estimated Population.
	Miles.	No.	No.	1,000Gallons.	Gallons.	Gallons.
1920 ..	505	40,266	193,160	3,293,061	8,997,436	46.58
1921 ..	546½	42,408	206,685	3,360,747	9,207,527	44.54
1922 ..	576½	46,025	221,080	3,648,833	9,996,805	45.22
1923 ..	620½	48,368*	235,980	4,292,246	11,759,579	46.76
1924 ..	645½	50,152*	246,300	4,378,486	11,963,078	44.68

* Metropolitan area.

The total length of the trunk mains is 129½ miles.

(c) *Brisbane Sewerage Scheme.* The main sewer from the treatment works to Toowong (13 miles) and the outfall sewers are complete; also two main sewers, one 3½ miles long, with a tunnel under Brisbane River, and the other 3 miles long. The treatment works are practically completed and in operation. The power house and pumping stations are under construction. The total completed is 122½ miles of main sewers and 48 miles of reticulation sewers. A temporary pumping plant has been installed and operated. Altogether 1,413 premises have been connected while 27,927 houses have been surveyed.

(d) *Brisbane Waterworks and Sewerage Works Finances.* The subjoined table gives particulars regarding finance during the years 1920 to 1924:—

WATER AND SEWERAGE WORKS, BRISBANE.—FINANCES, 1920 TO 1924.

Year.	Capital Cost.	Revenue, Net.	Working Expenses.	New Works Construction.	Interest and Redemption of Loans, including Sink- ing Fund.
	£	£	£	£	£
1920	3,661,580	219,742	94,074	546,578	88,033
1921	4,057,994	269,505	97,379	396,414	105,259
1922	4,618,211	305,450	105,397	560,217	188,038
1923	5,475,473	339,915	116,367	857,261	232,247
1924	6,330,764	(a)	146,585	855,291	303,201

(a) Not available.

(ii) *Country Towns Water Supply.* In addition to the City of Brisbane there were at the end of the year 1923 thirty-two towns in Queensland provided with water supply systems, constructed by municipalities chiefly from Government loans. The subjoined statement gives particulars of all the water supply systems, exclusive of Brisbane, for the year 1923:—

COUNTRY WATER SUPPLY SYSTEMS, QUEENSLAND, 1923.

<i>Cost of Construction to 31st December, 1923—£1,184,854.</i>					
<i>Receipts.</i>			<i>Expenditure.</i>		
	£			£	
Rates and sales of water ..	144,040		Administration ..	25,000	
Government loans ..	47,972		Construction ..	53,733	
Other ..	24,209		Maintenance ..	44,029	
			Interest and redemption ..	35,547	
			Other expenses ..	57,274	
Total receipts ..	216,221		Total ..	215,583	
Assets ..	920,874		Liabilities ..	641,710	

4. *South Australia.*—(i) *General.* The whole of the water supply systems as well as the several sewerage systems are constructed and maintained by the Public Works Department.

(ii) *Adelaide Waterworks.* (a) *Summary.* The following table gives particulars for the years 1919–20 to 1923–24. The figures for consumption are as recorded by gaugings taken at the reservoirs and include evaporation and absorption. There are 49,298 meters in the Adelaide district.

ADELAIDE WATERWORKS.—SUMMARY, 1919-20 TO 1923-24.

Year ended 30th June—			Number of Assessments	Annual Value.	Area Supplied.	Capacity of Reservoirs.	Length of Mains.	Annual Consumption (a).
			No.	£	Acres.	Million Gallons.	Miles.	1,000 Gallons.
1920	..	..	83,085	2,336,093	106,465	4,106	947	5,626,000
1921	..	..	84,995	2,584,704	106,465	7,753	991	5,179,000
1922	..	..	87,279	2,781,473	111,295	7,753	1,010	5,873,000
1923	..	..	91,903	3,337,345	111,295	7,753	1,034	6,599,000
1924	..	..	100,002	3,794,755	111,295	7,753	1,076	6,720,000

(a) For previous year ending 31st December.

(b) Year ended 30th June, 1923.

(c) Year ended 30th June, 1924.

(b) *Finances.* Particulars available are shown in the subjoined table for the years 1919-20 to 1923-24 :—

ADELAIDE WATERWORKS.—FINANCES, 1919-20 TO 1923-24.

Year ended 30th June—	Capital Cost.	Revenue.		Expenses.			Percentage of Net Revenue on Capital Cost.
		Rates.	Total.	Engineering Branch.	Revenue Branch.	Total.	
	£	£	£	£	£	£	%
1920	2,172,518	96,103	137,488	35,902	7,508	43,410	4.33
1921	2,768,769	107,665	177,722	42,700	9,678	52,378	4.53
1922	2,843,507	134,472	204,996	43,811	9,956	53,767	5.32
1923	2,924,702	167,465	232,478	47,532	9,737	57,269	5.99
1924	3,100,856	194,158	268,574	53,673	10,972	64,645	6.58

(iii) *Adelaide Sewerage.* Particulars for the years 1919-20 to 1923-24 are given hereunder :—

ADELAIDE SEWERAGE.—SUMMARY, 1919-20 TO 1923-24.

Year ended 30th June—	Length of Sewers.	Number of Connexions.	Capital Cost of Revenue-Producing Works.	Revenue.		Working Expenses.		Percentage of Net Revenue on Capital Cost.
				Rates, etc.	Total.	Maintenance, etc.	Total.	
	Miles.	No.	£	£	£	£	£	%
1920	363	38,979	860,438	65,744	86,076	13,396	24,046	7.21
1921	368	40,168	894,085	74,582	87,183	16,222	28,587	6.55
1922	373	41,240	946,213	79,562	90,525	17,083	29,893	6.41
1923	390	42,879	997,604	83,266	98,657	17,356	29,514	6.93
1924	406	45,415	1,095,683	87,066	100,707	19,428	29,646	6.49

(iv) *Country Towns Water Supply.* (a) *Summary.* The chief items of information regarding these undertakings are set forth in the table below for the years 1919-20 to 1923-24 :—

**COUNTRY TOWNS WATERWORKS, SOUTH AUSTRALIA.—SUMMARY,
1919-20 TO 1923-24.**

Year ended 30th June—	Number of Assessments.	Area Supplied.	Capacity of Reservoirs.	Length of Mains.	Annual Consumption (a).
	No.	Acres.	Million Gallons.	Miles.	1,000 Gallons.
1920	57,258	4,202,360	5,068	3,070	958,068
1921	58,552	4,847,295	4,978	3,136	770,030
1922	57,623	4,850,448	4,978	3,176	823,123
1923	60,552	4,933,732	6,350	3,257	1,071,094b
1924	60,200	11,252,740(c)	8,679	3,415	984,714d

(a) For previous year ending 31st December. (b) Year ended 30th June, 1923. (c) Includes the new Todd River Water District on Eyre Peninsula. (d) Year ended 30th June, 1924.

(b) *Finances.* The next table gives financial information for the years 1919-20 to 1923-24 :—

**COUNTRY TOWNS WATERWORKS, SOUTH AUSTRALIA.—FINANCES,
1919-20 TO 1923-24.**

Year ended 30th June—	Capital Cost.	Revenue.		Working Expenses.			Percentage of Net Revenue on Capital Cost.
		Rates.	Total.	Engineering Branch.	Revenue Branch.	Total.	
	£	£	£	£	£	£	%
1920 ..	4,017,265	70,526	108,584	38,651	6,297	44,948	1.58
1921 ..	4,168,876	73,024	110,656	42,084	7,220	49,304	1.47
1922 ..	4,368,091	66,527	96,373	50,475	7,821	58,296	0.87
1923 ..	4,562,092	78,649	105,865	56,039	8,034	64,073	0.90
1924 ..	5,200,184	84,241	120,599	66,007	8,303	74,310	0.89

(v) *Other Sewerage Systems.* The following table gives information in summarized form regarding the two suburban sewerage systems, viz. : the Glenelg system and the Port Adelaide and Semaphore system, for the years 1919-20 to 1923-24 :—

**SUBURBAN SEWERAGE SYSTEMS, SOUTH AUSTRALIA.—SUMMARY,
1919-20 TO 1923-24.**

Year ended 30th June—	Length of Sewers.	Number of Con-nexions.	Capital Cost.	Revenue.		Working Expenses.		Percentage of Net Revenue on Capital Cost.
				Rates.	Total.	Main-tenance.	Total.	
	Miles.	No.	£	£	£	£	£	%
1920 ..	58	4,657	354,084	8,765	9,849	5,581	5,952	1.10
1921 ..	59	5,216	372,520	10,507	11,606	10,148	10,607	0.27
1922 ..	63	5,868	400,198	12,145	13,520	10,347	10,978	0.64
1923 ..	67	6,576	423,620	13,055	14,449	12,693	13,307	0.27
1924 ..	72	7,208	451,709	17,538	18,855	14,595	15,165	0.81

5. *Western Australia.*—(i) *General.* The water supply and sewerage systems of Western Australia are all under the management of Government departments, and are divided into the following categories:—(a) Metropolitan Water Supply, Sewerage and Drainage covering Perth, Fremantle, Claremont, Guildford, Midland Junction and Armadale District, (b) Goldfields Water Supply, (c) Water Supply of other towns, (d) Agricultural Water Supply, (e) other Mines Water Supply, and (f) artesian and sub-artesian waters. The consumption of water by the railways is included in the figures for water supplied given hereunder.

(ii) *Metropolitan Water Supply, Sewerage and Drainage.* (a) *General.* The sources of the metropolitan water supply are the Victoria Reservoir, Bickley Brook, Lower Bickley Brook, Mundaring Reservoir, thirteen bores and the Armadale Pipe Head Dam. The sewerage system consists of septic tanks and percolating filters for Perth, and septic tanks and ocean outfall for Fremantle. At the 30th June, 1924, the number of houses connected with sewers was 15,023.

(b) *Summary.* The following table gives particulars regarding water supply for the years 1920 to 1924.

WATER SUPPLY, WESTERN AUSTRALIA.—SUMMARY, 1920 TO 1924.

Year ending 30th June—	Estimated Population Supplied.	Number of Houses Supplied.	Water Supplied.	Average Daily Supply.		Number of Meters.	Length of Mains.
				Per Head.	Per House.		
	No.	No.	1,000 Gallons.	Gallons.	Gallons.	No.	Miles.
1920	166,414	34,677	2,256,100	37.04	177.76	21,437	633
1921	171,198	35,666	2,327,042	37.24	178.75	21,367	645
1922	175,876	36,641	2,600,697	40.51	194.46	21,511	659
1923	182,410	38,002	2,714,791	40.77	195.72	21,782	677
1924	189,053	39,386	3,089,825	44.77	214.93	22,114	700

(c) *Finances.* The table hereunder gives particulars for the water supply and sewerage and drainage branches separately for the years 1920 to 1924:—

WATER SUPPLY AND SEWERAGE AND DRAINAGE, WESTERN AUSTRALIA.—FINANCES, 1920 TO 1924.

Year ended 30th June—	Water Supply.			Sewerage and Drainage.		
	Capital Cost.	Revenue.	Expendi- ture.	Capital Cost.	Revenue.	Expendi- ture.
	£	£	£	£	£	£
1920	1,119,910	96,882	103,570	947,411	59,628	66,001
1921	1,223,951	113,439	117,136	958,452	61,961	71,773
1922	1,309,262	122,669	129,412	968,540	70,086	72,153
1923	1,410,442	126,028	134,316	1,015,930	74,771	74,777
1924	1,722,594	135,250	152,824	1,055,612	83,388	76,532

(iii) *Goldfields Water Supply.* The source of supply for the Coolgardie and adjacent goldfields, as well as for places on or near the pipe-line, is the Mundaring Reservoir, which has a capacity of 4,650 million gallons. There are three classes of consumers—the railways, the mines, and “other,” and in 1922–23 the railways consumed 8 per cent., the

mines 21 per cent., and "other" 71 per cent. of the supply. The following table gives statistical data for the years 1920 to 1924 :—

GOLDFIELDS WATER SUPPLY, WESTERN AUSTRALIA.—SUMMARY, 1920 TO 1924.

Year ended 30th June—	Total Consumption.	Number of Services.	Length of Water Mains.	Capital Cost.	Revenue.	Expenditure.
	1,000 gallons.	No.	Miles.	£	£	£
1920	1,126,000	12,244	1,221	3,401,543	176,364	295,574
1921	1,130,000	12,238	1,219	3,427,300	187,010	311,070
1922	1,153,320	10,789	1,224	3,432,234	180,127	297,027
1923	1,169,000	10,899	1,234	3,445,059	178,495	217,680
1924	1,159,000	10,628	1,303	3,487,887	167,597	212,713

(iv) *Water Supply of other Towns.* During the year 1922–23, there were thirteen towns provided with water supplies, apart from those in the metropolitan area and those supplied by the Goldfields Water Scheme. The total consumption of water by these thirteen towns for the year ending 30th June, 1923, was 114,368,000 gallons, and the estimated population served was 13,464. The average daily consumption was 23.27 gallons per head. In eleven other towns the water supplies are administered by local boards.

(v) *Agricultural Water Supply.* During the year 1923–24, thirteen (13) tanks were excavated, and five (5) wells sunk, of which one yielded fresh water and 4 stock water. During the fourteen years from the 1st July, 1910, to the 30th June, 1924, 385 tanks were built, 308 wells sunk, and 2,599 bores put down to a total depth of 128,104 feet. Of the bores mentioned, 443 yielded fresh, and 236 stock-water.

(vi) *Other Mines Water Supply.* Twenty-eight bores were put down to a total depth of 1,283 feet; six of these provide fresh and one salt water. Three fresh-water wells were also sunk for the use of the travelling public.

(vii) *Artesian and Sub-artesian Waters.* Up to the 30th June, 1924, the total number of bores put down in search of artesian or sub-artesian water was 215, including 49 sunk in the metropolitan area, ranging in depth from 32 to 4,006 feet.

6. *Tasmania.*—(i) *Hobart Water Supply.* The cost of this undertaking to the 31st December, 1924, was £402,304, but a considerable amount of reticulation work has been done out of revenue and not charged to capital account. The outstanding loans at 30th June, 1924, amounted to £357,704. At the 31st December, 1924, the number of tenements supplied in the city and suburbs was 9,958, the population 46,100, and the length of reticulation mains 107 miles. The revenue and expenditure for the years 1920 to 1924 were as follows :—

HOBART WATERWORKS.—REVENUE AND EXPENDITURE, 1920 TO 1924.

Heading.	1920.	1921.	1922.	1923.	1924.
	£	£	£	£	£
Revenue	28,287	30,671	36,798	35,494	34,965
Expenditure	30,696	33,773	33,697	35,494	34,965

(ii) *Hobart Sewerage System.* The revenue for the year ended 30th June, 1924, was £27,177. Up to 31st December, 1924, 76 miles of sewers had been laid in connexion with the original city system at a cost of £209,917, and 1,841 tenements connected. Since the

original city was sewered, the Municipalities of Queenborough and New Town have been included in the city area, and are being reticulated. In Queenborough 23 miles of sewers, connecting with 1,019 tenements, have been constructed at a cost of £111,017. In New Town a total of 13½ miles of sewers has been laid, and 345 properties connected. The cost to 30th June, 1924, including surveys and sewerage outfall, was £63,132.

§ 6. Harbour Boards and Trusts.

1. New South Wales.—(i) *Sydney Harbour Trust*. (a) *General*. The Sydney Harbour Trust, which consists of three Commissioners appointed by the Government, controls the whole of the wharves resumed by the Government in 1901. The Commissioners also provide and maintain the lighting and marking of the harbour, and carry out all necessary dredging. The whole of what might be termed city wharves are owned by the Commissioners and leased to various shipping companies, but the Trust directly operates and maintains a certain number of open wharves. Outside the city area the wharves are, to a large extent, privately controlled, but all structures beyond high-water mark are held under leases issued by the Trust. The extent of wharfage accommodation now available for use totals 58,200 lineal feet, inclusive of 7,800 lineal feet privately owned.

The depth of water at the entrance to the port is not less than 80 feet and in the channels there are 40 feet at low-water spring tides. The foreshores of Sydney Harbour are about 200 miles in length. The area of the water in the port is 14,284 acres, of which 3,000 acres have a depth ranging from 35 to 160 feet.

Since its inception, the Trust has spent £5,814,768 on the reconstruction and extension of the wharfage of the port. Over 12,000 lineal feet of old and obsolete wharfage have been demolished, and 33,500 lineal feet of new berths have been constructed. Other improvements include 2,250,000 square feet of floor area of new sheds and nearly four miles of new roadways.

During the year 1924, 1,603,700 tons of material were dredged at a cost of £54,416. In the process of towing such material, 44,705 miles were run at a cost of £36,253.

(b) *Finances*. The subjoined table gives particulars concerning the finances of the Trust for the years 1920 to 1924:—

SYDNEY HARBOUR TRUST.—FINANCES, 1920 TO 1924.

Year ended 30th June—	Revenue.				Expenditure.	Total Capital Debt.	Interest.	Balance.
	Wharfage and Harbour Rates.	Tonnage Rates and Berthing Charges.	Other Sources.	Total.				
	£	£	£	£	£	£	£	£
1920 ..	323,306	22,398	312,609	658,313	206,450	8,959,887	353,037	98,826
1921 ..	429,986	43,577	323,648	797,211	244,764	9,449,213	438,210	114,237
1922 ..	451,981	44,465	330,676	827,122	261,120	9,868,165	488,552	77,450
1923 ..	517,740	39,570	294,931	852,241	253,614	10,129,113	514,756	83,871
1924 ..	553,295	44,879	299,183	897,357	276,883	10,417,859	528,743	91,731

2. Victoria.—(i) *Melbourne Harbour Trust*. (a) *General*. Information regarding the origin and constitution of this Trust will be found in Official Year Book No. 12, pp. 970 *et seq.* In 1924, the length of sheds in the port was 19,468 feet, covering an area of 1,125,295 square feet. The quantity of material raised by the dredging and excavation done in the improvement of the river and bay amounts to 79,552,951 cubic yards. The Trust has expended £337,789 in reclaiming land within its jurisdiction.

(b) *Finances.* The following table gives particulars of the revenue and expenditure of the Trust from 1920 to 1924 inclusive. Up to 31st December, 1924, the total capital expenditure amounted to £5,543,783.

MELBOURNE HARBOUR TRUST.—FINANCES, 1920 TO 1924.

Particulars.	1920.	1921.	1922.	1923.	1924.
REVENUE.					
	£	£	£	£	£
Rates, rents, etc.	380,203	491,677	589,583	681,958	711,558
Interest	46	42	80	328	669
Other receipts	10,253	9,718	12,807	9,850	17,095
Total	390,502	501,437	602,470	692,136	729,322
EXPENDITURE.					
Management and general expenses ..	51,178	57,226	61,763	60,997	74,086
Interest	106,735	114,860	144,883	124,109	131,674
Total	157,913	172,086	206,646	185,106	205,760
Less standing charges added to works	29,150	30,862	34,628	37,272	43,749
Total	128,763	141,224	172,018	147,834	162,011
Wharfage and other refunds	2,529	3,064	3,866	5,728	4,879
Consolidated revenue of Victoria ..	75,554	96,224	114,986	135,520	140,382
Flotation of loans expenses	300	29,525	35	750	5
Redemption of loans expenses .. .. .	..	615	..	..	..
Maintenance	105,147	120,412	126,051	85,458	130,234
Total expenditure	312,293	391,064	416,956	375,290	437,511
Surplus on revenue account	78,209	110,373	185,514	316,846	291,811
Less depreciation and renewals account and sinking fund	52,500	65,000	100,000	213,000	213,000
Net surplus on revenue account	25,709	45,373	85,514	103,846	78,811
CAPITAL EXPENDITURE.					
Land and property	3,221	2,461	11,906	32,892	548
Deepening waterways	80,720	81,699	98,331	150,885	137,488
Wharves construction	50,084	79,206	45,613	67,360	194,318
Approaches construction	2,364	1,565	9,084	7,519	25,483
Other harbour improvements	2,936	14,099	25,311	8,719	23,826
Floating plant	834	2,957	1,708	632	3,192
General plant	883	1,131	925	2,025	3,440
Total	141,042	183,118	192,878	270,032	388,295

(ii) *Geelong Harbour Trust.* (a) *General.* The Geelong Harbour Trust was constituted in 1905, and is under the control of three Commissioners appointed by the Governor in Council. The Commissioners have vested in them the Port of Geelong which includes Corio Bay, Portarlington, some miles of Bay frontage, and certain lands on the River Barwon and at Barwon Heads. The Commissioners have established complete facilities for the export of grain, frozen meat, and other produce, and have also constructed extensive abattoirs and freezing works. A large amount of money has been expended in the reclamation of waste lands, and on part of such lands a dairy farm with a complete system of drainage and irrigation has been established.

(b) *Finances.* The following table gives financial details for the years 1920 to 1924:—

GEELONG HARBOUR TRUST.—FINANCES, 1920 TO 1924.

Year.	Loans.	Sinking Fund.	Revenue.	Expenditure.
	£	£	£	£
1920	591,000	27,954	50,020	60,625
1921	591,000	28,667	49,636	53,605
1922	591,000	29,379	54,234	52,066
1923	591,000	33,045	58,680	56,065
1924	591,000	36,912	61,356	52,315

3. *Queensland.*—(i) *Bowen Harbour Board.* (a) *General.* The Bowen Harbour Board consists of seven members, of whom two are appointed by the Governor in Council and the remainder elected by the electors of the Town of Bowen and adjacent shires. The district under its jurisdiction comprises the area within the boundaries of the Town of Bowen, the Shires of Proserpine and Wangaratta, and division I. of the Shire of Ayr.

(b) *Finances.* The capital expenditure to the 31st December, 1924, was £59,435, while for the year 1924 the receipts were £9,774 and the expenditure £6,435.

(ii) *Bundaberg Harbour Board.* (a) *General.* The Bundaberg Harbour Board was re-constituted under an Act of 1922, and consists of nine members, of whom one is appointed by the Governor in Council, four by the City of Bundaberg, and two each by the Shires of Gooburrum and Woongarra, these three municipalities comprising the Harbour Board District. The jurisdiction of the Board extends over the harbour of Bundaberg and certain lands adjacent to the River Burnett.

(b) *Finances.* The revenue for the year 1924 amounted to £6,803 as against £4,563 for the previous year, and the expenditure to £5,423 as compared with £4,434 for 1923.

(iii) *Cairns Harbour Board.* (a) *General.* The Cairns Harbour Board consists of twelve members, representing the town of Cairns and eight adjoining shires. The wharves at Cairns, which are all under the control of this Board, are constructed of reinforced ferro-concrete and are 1,500 feet in length. Mechanical sugar-handling conveyors have been installed at a cost of over £37,000. The wharves are electrically lighted and furnished with railways. The gantry 10-ton crane for handling sinker logs is being replaced by an electric portable crane estimated to cost £3,837. There is a special railway wharf with facilities for handling floater logs. A cold storage plant has been built at a cost of £9,000.

(b) *Finances.* During the year 1924 the revenue of the Board was £57,452, derived from harbour, berthage and miscellaneous dues.

(iv) *Gladstone Harbour Board.* (a) *General.* The Gladstone Harbour Board is composed of seven members, two of whom are appointed by the Governor in Council and five elected by the electors of the town of Gladstone and the shires of Calliope and Miriam Vale. The works under the control of the Board are (i) Auckland Point Jetty and Wharf, constructed of reinforced concrete and wood, the berth being 775 feet long, with an average depth alongside of 26 feet; (ii) the municipal wharf in Auckland-street; (iii) wharf dumping plant on Auckland Point jetty, consisting of two hydraulic dumps, capable of doing either single or double dumping. Works under construction are (i) 15-ton electric crane for coal and timber for export; (ii) extension of 208 feet to western end of existing jetty; (iii) duplication of approach for mixed traffic; (iv) additional approach to jetty shed.

(b) *Finances.* The total capital expenditure to the end of 1924 amounted to £89,892. The revenue for 1924 was £2,859, and the expenditure £3,064.

(v) *Mackay Harbour Board. (a) General.* The Mackay Harbour Board consists of nine members, elected by the electors of the City of Mackay and four adjacent shires. Works in connexion with the director wall in the Pioneer River were completed in June, 1924.

(b) *Finances.* The total capital expenditure of the Board from its inception in 1897 is not available, but the capital expenditure for the year ended 31st December, 1924, was £1,267. During the year 1924 the receipts amounted to £9,787 and the expenditure to £15,373.

(vi) *Rockhampton Harbour Board. (a) General.* The Rockhampton Harbour Board consists of eleven members, of whom seven are elected by the electors on the rolls for the city of Rockhampton, the town of Mount Morgan and the shires of Fitzroy and Livingstone. The remaining four are elected by the councillors of groups of inland shires.

In the port of Rockhampton, which comprises the tidal area of the Fitzroy River as far as the entrance to Keppel Bay, there are three principal places where steamers may lie and discharge cargo, viz., (i) Rockhampton itself, (ii) Port Alma, where the oversea steamers berth, and (iii) Broadmount, originally built for the oversea trade of twenty-five years ago. The wharves at these three places are connected by rail with Rockhampton and with the main central line. The Board undertakes the work of improving the navigable channels throughout the estuary and river, and of maintaining the wharves at Port Alma and Rockhampton.

(b) *Finances.* The revenue for the year 1924 was £32,662, of which £111 represented loans, and the expenditure was £30,972, which included £11,253 interest on loans and overdraft.

(vii) *Townsville Harbour Board. (a) General.* The Townsville Harbour Board was created in 1896, and is composed of nine members, of whom two are appointed by the Governor in Council, and the remaining seven are elected by the electors of Townsville and adjacent towns and shires. All harbour works and conveniences for the use of shipping are under the control of the Board.

(b) *Finances.* The total expenditure since the inception of the Board is £1,602,956, while the receipts for the year 1924 were £58,103, being £55,541 revenue and £2,562 loan for harbour works, and the expenditure for the same year £58,207.

(viii) *Harbour Boards—Financial Summary.* The following table shows the total revenue and expenditure of Harbour Boards and the outstanding loans for the years 1919 to 1923:—

HARBOUR BOARDS, QUEENSLAND.—FINANCIAL SUMMARY, 1919 TO 1923.

Year.	Number of Boards.	Revenue.			Expenditure.			Outstanding Loans.
		Wharfage and Harbour Dues.	Government Loans.	Total.	Works and Maintenance.	Interest and Redemption of Loans.	Total.	
		£	£	£	£	£	£	£
1919	6	87,153	9,044	139,592	65,629	35,570	128,663	886,677
1920	6	108,212	17,712	179,432	90,761	51,492	178,436	887,628
1921	7	117,417	46,219	183,949	101,563	65,452	199,341	979,341
1922	7	132,234	78,506	234,827	171,853	58,492	230,345	1,077,833
1923	7	142,848	120,281	320,105	233,894	56,156	290,050	1,209,022

4. *Western Australia.—(i) Fremantle Harbour Trust. (a) General.* Fremantle Harbour is controlled by a Board of five Commissioners appointed by the Governor in Council. A description of the works was given in a previous Year Book (see No. 12, p. 973). Since that account was written, the inner harbour and entrance channel have been dredged to a depth of 36 feet below the lowest known low water. The berthage accommodation at all the quays has also been deepened to 36 feet.

(b) *Finances.* The following table gives financial data for the years 1920 to 1924 :—

FREMANTLE HARBOUR TRUST.—FINANCES, 1920 TO 1924.

Year ended 30th June—	Revenue.	Expenditure.	Gross Amount Paid to the Treasury.				
			Interest.	Sinking Fund.	Renewals Fund.	Surplus Revenue.	Total.
	£	£	£	£	£	£	£
1920	281,600	130,740	73,872	19,301	2,000	54,513	149,686
1921	301,065	133,904	77,240	19,819	2,000	71,410	170,469
1922	282,038	126,597	80,218	20,277	2,000	56,491	158,986
1923	282,015	120,086	83,386	20,764	2,000	47,272	153,422
1924	357,450	146,177	85,703	21,185	2,000	96,612	205,500

(ii) *Bunbury Harbour Board.* (a) *General.* The Bunbury Harbour Board was constituted in 1909, and consists of five members appointed by the Government. The jetty is 4,900 feet long with berthage accommodation of 2,700 feet on the west side and 3,000 feet on the east side, and is electrically lighted. Vessels can load alongside to depths ranging from 16 to 27½ feet. Five electric and one steam gantry cranes, all of 3 tons lifting capacity, are available.

(b) *Finances.* The following table gives the capital expenditure for each of the five years ending 30th June, 1920 to 1924, together with the revenue and expenditure for the same years. Any surplus revenue is paid into the Consolidated Revenue Fund to meet interest and sinking fund.

BUNBURY HARBOUR BOARD.—FINANCES, 1920 TO 1924.

Year ended 30th June—	Capital Expenditure.	Revenue.	Expenditure.	Paid to Consolidated Revenue Fund.
	£	£	£	£
1920	377,688	16,487	8,013	8,474
1921	417,611	28,980	8,843	20,137
1922	440,965	26,175	9,818	16,357
1923	448,377	25,746	8,749	16,997
1924	450,000	33,836	10,707	23,129

5. *Tasmania.*—(i) *Marine Board of Hobart.*—(a) *General.* The Marine Board of Hobart consists of nine wardens elected by the ship-owners of the Port of Hobart and the importers and exporters of goods into or from any port within the jurisdiction of the Board. The Board has jurisdiction over all ports, harbours and waters within the limits of the coast line from South-West Cape round the southern and eastern coasts to Cape Portland, and within all islands adjacent to such coast line. The duties of the Board are to maintain all wharves within its jurisdiction which are not vested in another authority or belonging to any private person, to construct new wharves where necessary, and to improve the navigation where desirable.

(b) *Finances.* The following table gives details for the years 1920 to 1924 :—

MARINE BOARD OF HOBART.—FINANCES, 1920 TO 30th JUNE, 1924.

Year.	Capital Debt.	Revenue.			Expenditure.			
		Harbour Improve-ments, Deben-tures, etc:	General.	Total.	Harbour Improve-ments.	Interest and Sinking Fund.	General.	Total.
	£	£	£	£	£	£	£	£
1920	106,350	4,568	30,584	35,152	3,859	5,585	21,807	31,251
1921	96,350	..	30,055	30,055	1,080	5,400	29,470	35,950
1922 (to 30th June) ..	92,350	..	16,133	16,133	3	3,265	11,975	15,243
1922-23 ..	90,350	..	32,620	32,620	373	6,511	25,670	32,554
1923-24 ..	86,806	2,456	37,465	39,921	226	6,180	35,865	42,271

(ii) *Marine Board of Launceston.* (a) *General.* The Marine Board of Launceston consists of five wardens elected by the ratepayers of the city of Launceston. The jurisdiction of the Board extends from Cape Portland along the north coast of Tasmania to Badger Head. The chief work carried out has been to deepen the channel of the River Tamar to 16 feet and to maintain the wharves. An important work was completed in 1923, the removal to a depth of 30 feet of Porpoise Rock, which lies 4 miles from the entrance of the port. It is proposed to establish a deepwater port at Bell Bay. The wharfrage accommodation at Launceston is being extended.

(b) *Finances.* The following table gives details for the years 1920 to 1924 :—

MARINE BOARD OF LAUNCESTON.—FINANCES, 1920 TO 1924.

Year.	Total Capital Debt.	Capital Debt, Tamar Improvement.	Revenue.	Expenditure.
	£	£	£	£
1920	263,718	216,480	39,569	40,865
1921	303,861	256,822	44,421	45,688
1922	318,361	271,322	47,638	40,021
1923	318,361	282,710	49,928	47,588
1924	330,713	283,475	53,672	46,044

(iii) *Marine Board of Burnie.* The length of the breakwater is 1,250 feet, with a depth up to 42 feet at low water, and a wharf alongside, 630 feet in length by 91 feet wide, with a depth at low water from 24 to 40 feet. There are two other timber wharves, 600 feet and 400 feet long respectively. The receipts for the year ending 30th June, 1924, were £18,311, and the expenditure £19,429, including £13,000 interest on construction loans.

(iv) *Other Boards and Trusts.* In addition to the three Marine Boards mentioned above, there are four Marine Boards and three Harbour Trusts, which have control of the smaller ports and harbours.

(v) *Financial Summary.* The total receipts and expenditure of the ten marine Boards and Harbour Trusts for the years 1919 to 1923-24 are shown in the following table :—

MARINE BOARDS AND HARBOUR TRUSTS, TASMANIA.—FINANCIAL SUMMARY, 1919 TO 1923-24.

Year.	Receipts.				Expenditure.
	Taxes, Rents, etc.	Government and Loans.	Other.	Total.	
	£	£	£	£	£
1919	73,485	998	15,552	90,035	100,298
1920	85,845	5,154	83,412	174,411	207,378
1921	109,363	3,867	4,957	118,187	116,358
1922-23*	143,200	19,023	21,743	183,966	172,485
1923-24	162,801	4,360	72,856	240,017	227,389

* Figures for 18 months (except in the case of three trusts), the financial year having been changed.

§ 7. Fire Brigades.

1. New South Wales.—(i) *General.* Under the Fire Brigades Act of 1909, a Board of Fire Commissioners consisting of five members was formed, and fire districts established. The cost of maintenance of fire brigades is borne in equal proportions by the Government, the municipalities, and the insurance companies concerned, but the expenditure must be so regulated that the proportion payable by the councils in a fire district shall not exceed the amount obtainable from a farthing in the pound rate on the unimproved capital value of the district.

(ii) *Sydney Fire District.* (a) *Plant, etc.* The Sydney fire district includes the City of Sydney and suburbs, comprising a total area of 237 square miles. On the 31st December, 1924, the Board had under its control in this district 71 stations, 363 permanent men, 228 partially-paid firemen, 3 steam and 67 motor fire engines, 152,316 feet of hose, and 563 telephone fire-alarms. The length of wire used for telephone lines was 1,462 miles.

(b) *Finances.* The subjoined table shows the receipts and disbursements of the Board for the past five years in respect of the Sydney Fire District :—

SYDNEY FIRE DISTRICT.—FINANCES, 1920 TO 1924.

Year.	Receipts.						Disbursements.
	From Government.	From Municipalities.	From Fire Insurance Companies.	From Firms.	From other Sources.	Total.	
	£	£	£	£	£	£	£
1920	47,808	47,808	47,218	589	3,815	147,238	143,262
1921	54,355	54,355	53,820	535	6,457	169,522	163,528
1922	53,979	53,979	53,425	554	4,745	166,682	163,750
1923	58,153	58,153	57,551	602	5,954	180,413	178,585
1924	60,768	60,768	60,183	584	5,401	187,704	186,159

2. Victoria.—(i) *General.* The Fire Brigades Act of 1915 provides for a Metropolitan Fire Brigades Board, and a Country Fire Brigades Board, each consisting of nine members, with local committees in country districts. The income of each Board is derived in equal proportions from the Treasury, the municipalities, and insurance companies.

(ii) *Metropolitan Fire Brigades Board.* (a) *Plant, etc.* On the 30th June, 1924, this Board had under its control 40 stations, 271 permanent men, 130 partially-paid firemen, 65 special-service firemen, 5 motor drawn steam fire engines, 8 petrol motor fire pumps, 57 other petrol motor appliances, 2 steam fire engines, 102,926 feet of hose, and 401 fire-alarm circuits having 1,212 street fire alarms, 1,195 containing telephones.

(b) *Finances.* The following table gives particulars as to the financial operations of the Board during each year from 1919-20 to 1923-24 inclusive :—

**METROPOLITAN FIRE BRIGADES BOARD, VICTORIA.—FINANCES,
1920 TO 1924.**

Particulars.	1920.	1921.	1922.	1923.	1924.
RECEIPTS.					
Contributions	£ 95,225	£ 117,893	£ 125,685	£ 122,700	£ 131,739
Receipts for services ..	9,651	10,807	21,857	14,028	16,486
Interest and sundries ..	3,593	11,797	3,926	6,898	9,811
Total	108,469	140,497	151,468	143,626	158,036
EXPENDITURE.					
Salaries	£ 67,060	£ 85,537	£ 87,523	£ 93,033	£ 85,477
Interest and sinking fund ..	12,970	14,100	21,136	10,219	10,821
Other expenditure	26,963	41,859	46,198	43,515	59,172
Total	106,993	141,496	154,857	146,767	155,470

(iii) *Country Fire Brigades Board.* (a) *Plant, etc.* At 30th June, 1924, there were 115 municipal councils and 96 insurance companies included in the operations of the Act. The brigades are composed chiefly of volunteers, but in the large centres a few permanent station-keepers and partially-paid firemen are employed. There were 142 registered brigades and 2,710 registered firemen at 30th June, 1924. The equipment included 27 motor tenders, 3 steam fire engines, and numerous manual engines and hose reels.

(b) *Revenue and Expenditure.* The following table shows the revenue and expenditure of the Country Fire Brigades Board for the years 1920 to 1924 (30th June) :—

**COUNTRY FIRE BRIGADES BOARD, VICTORIA.—REVENUE AND
EXPENDITURE, 1920 TO 1924.**

Particulars.	1920.	1921.	1922.	1923.	1924 (to 30th June).
Revenue	£ 18,816	£ 19,995	£ 22,718	£ 22,088	£ 16,907
Expenditure	18,544	20,353	23,122	22,813	16,432

3. *Queensland.*—(i) *General.* The Act of 1920 made provision for the retention of existing fire districts, and for the constitution of new districts. For each district there must be a Fire Brigades Board consisting of seven members, and the cost of maintenance of each brigade is proportioned as follows :—The Treasurer two-sevenths, insurance companies three-sevenths, and local authorities two-sevenths. All volunteer fire brigades must be registered.

(ii) *Fire Brigades Boards.* (a) *Plant, etc.* At the end of the year 1923 there were fire brigades in 26 towns, with a total strength of 120 permanent men, 285 partly paid, and 51 voluntary. The plant included 24 motor, 5 steam, and 11 manual fire engines, 63 hose reels, consisting of 15 motor, 7 horse, and 41 hand reels, and 87,112 feet of hose. The total number of call points was 300. The Metropolitan Fire Brigade protects an area of 32 square miles and has a staff of 144 men.

(b) *Revenue and Expenditure.* The following table shows the revenue and expenditure of all fire brigades in Queensland for the years 1919 to 1923 :—

**FIRE BRIGADE BOARDS, QUEENSLAND.—REVENUE AND EXPENDITURE,
1919 TO 1923.**

Year.	Revenue.				Expenditure.			
	From Govern-ment.	From Local Authorities.	From Insurance Companies.	Total.	Salaries and Wages.	Buildings, Repairs, etc.	Plant, Stores, etc.	Total.
	£	£	£	£	£	£	£	£
1919 ..	12,135	12,162	12,266	38,356	23,090	4,937	4,938	38,641
1920 ..	13,724	13,320	20,330	48,573	28,583	4,499	7,793	56,306
1921 ..	14,637	14,524	22,313	54,685	31,513	3,866	8,856	55,263
1922 ..	14,711	14,996	22,976	53,647	34,340	3,687	8,444	56,071
1923 ..	16,054	15,094	22,455	64,190	35,803	12,336	10,166	64,597

4. *South Australia.*—(i) *General.* The Fire Brigades Act of 1913 and amendments provides for a Board of five members, and the expenses and maintenance of brigades are defrayed as to two-ninths by the Treasury, five-ninths by insurance companies, and two-ninths by the municipalities concerned.

(ii) *Fire Brigades Board.* (a) *Plant, etc.* At the end of 1924 there were altogether 22 fire brigade stations. The strength of the brigades consists of 109 permanent firemen and 66 auxiliary firemen. The plant consists of 2 steam fire engines, 5 motor engines, 22 motor hose carriages, 54,400 feet of hose, one 90 feet turntable escape ladder, 2 telescopic currie ladders, and 2 fire escapes.

(b) *Revenue and Expenditure.* The following table shows the revenue of the Board for the years 1919 to 1923, the expenditure in each year being the same :—

FIRE BRIGADES BOARD, SOUTH AUSTRALIA.—REVENUE, 1919 TO 1923.

Heading.	1919.	1920.	1921.	1922.	1923.
Revenue	£ 31,129	£ 33,568	£ 35,817	£ 37,306	£ 35,071

5. *Western Australia.*—(i) *General.* Under the 1916 Act every municipal or road board district is constituted a fire district under the control of the Western Australian Fire Brigades Board. The income of the Board is derived as to two-eighths from Government, three-eighths from municipalities, and three-eighths from insurance companies.

(ii) *Western Australian Fire Brigades Board.* (a) *Plant, etc.* The whole of the brigades throughout the State are now controlled by the Western Australian Fire Brigades Board, and number 42. The staff at the 31st December, 1924, included a chief officer, deputy chief officer, third officer, motor engineer, electrical engineer, 10 other officers, 67 permanent, 28 partially-paid, and 485 volunteer firemen. The plant comprised 4 steam, 5 motor and 4 manual engines, 18 motor hose carriages, 37 reels, and 75,200 feet of hose.

(b) *Finances.* The following table gives details for the years 1920 to 1924:—

WESTERN AUSTRALIAN FIRE BRIGADES BOARD.—FINANCES, 1920 TO 1924.

Year ended 31st December—	Revenue.	Expenditure.	Estimated Value.	
			Land and Buildings.	Plant.
	£	£	£	£
1920	30,100	33,423	49,000	26,000
1921	40,630	35,511	46,840	26,000
1922	34,833	34,746	46,000	26,000
1923	35,553	35,463	46,000	28,000
1924	38,720	38,621	48,650	28,000

6. *Tasmania.*—(i) *General.* The municipal council of any municipality may, under the Act of 1920, petition the Governor to proclaim the municipality or any portion of it to be a fire district, each district to have a Board of five members. The expenses of each Board are borne in equal proportions by contributions from the Treasurer, the municipalities concerned, and insurance companies insuring property within the district.

(ii) *Hobart Fire Brigade Board.* (a) *Plant, etc.* At the end of 1923 the staff consisted of 12 permanent and 18 partially-paid firemen. There were at that date also 1 motor pump, 1 extension and 1 currie ladder, two motor hose carriages, 3 horse and 4 hand reels, and 8 Pompier ladders, and 8,500 feet of hose.

(b) *Revenue and Expenditure.* The revenue for the years 1923 and 1924 amounted to £5,167 and £6,172 respectively, expenditure being the same for each year.

CHAPTER V. LAND TENURE AND SETTLEMENT.

§ 1. Introduction.

1. **General.**—A comprehensive description of the land tenure systems of the several States was given in Official Year Book No. 4 (pp. 235 to 333), while later alterations were referred to in subsequent issues. In this chapter a summary is given of the principal features of existing land legislation together with some account of the various tenures under which Crown lands may be taken up at the present time. Special paragraphs are devoted to the settlement of returned soldiers on the land, the tenure of land by aliens, and advances to settlers. Particulars as to the areas of land alienated in each State and similar matter are also included.

2. **State Land Legislation.**—The legislation in force relating to Crown lands, Closer Settlement, Returned Soldiers' Settlement, and other matters dealt with in this chapter is summarized in the following conspectus:—

STATE LAND LEGISLATION.

New South Wales.	Victoria.	Queensland.
CROWN LANDS ACTS.		
Crown Lands Act 1913-1923: Western Lands Act 1901-1919: Crown Lands Purchase Validation Act 1923. Crown Lands Amendment (Disposal) Act 1923 Crown Lands and Closer Settlement (Amending) Act 1924	Land Act 1915-1923.	Land Act 1910-1924. Upper Burnett and Callide Land Settlement Act 1923 Prickly-pear Land Act 1923 Sugar Workers' Perpetual Lease Selections Act 1923

CLOSER SETTLEMENT ACTS.

Closer Settlement Act 1904-1919: Closer Settlement Purchases Validation Act 1923.	Closer Settlement Act 1915-1923.	Closer Settlement Act 1906-1923.
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MINING ACTS.

Mining Act 1906-1924: Mining Leases (Validation) Act 1924.	Mines Act 1915-1921.	Mining Acts 1898-1920: Mining for Coal and Mineral Oil Act 1912: Petroleum Act 1915-1923: Miners' Homestead Perpetual Leases Act 1913-1921.
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RETURNED SOLDIERS' SETTLEMENT ACTS.

Returned Soldiers' Settlement Act 1916-1922.	Discharged Soldiers' Settlement Act 1917-1924.	Discharged Soldiers' Settlement Act 1916-1923.
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ADVANCES TO SETTLERS ACTS.

Government Savings Bank Act 1906-1923: Returned Soldiers' Settlement Act 1916-1922.	State Savings Bank Act 1915-1922: Primary Products Advances Act 1919-1922: Closer Settlement Act 1915-1923: Fruit Act 1915-1920: Discharged Soldiers' Settlement Act 1917-1924.	State Advances Act 1916: Co-operative Agricultural Products and Advances to Farmers Act 1914-1919: Agricultural Bank Act 1923.
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3. **Northern Territory Land Legislation.**—In the Northern Territory, the legislation relating to Crown land is embodied in the Crown Lands Ordinance 1924, that relating to mining in the Northern Territory Mining Act 1903, the Gold Dredging Act 1899, the Tin Dredging Ordinance 1911–1920, and the Mineral Oil and Coal Ordinance 1922–1923; and that relating to Advances to Settlers in the Advances to Settlers Act 1923, and the Encouragement of Primary Production Ordinance 1924.

4. **Federal Capital Territory Land Legislation.**—In the Federal Capital Territory, the Ordinances relating to Crown lands are the Leases Ordinance 1918–1923, the Recreation Land Leases Ordinance 1923, the Land Board Ordinances 1923–1924, the City Area Leases Ordinance 1924, and the Church Lands Leases Ordinance 1924.

STATE LAND LEGISLATION—*continued.*

South Australia.	Western Australia.	Tasmania.
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CROWN LANDS ACTS.

Crown Lands Act 1915–1919: Pastoral Act 1904–1922.	Land Act 1898–1923.	Crown Lands Act 1911–1924.
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CLOSER SETTLEMENT ACTS.

Crown Lands Act 1915–1919.	Agricultural Lands Purchase Act 1909–1922.	Closer Settlement Act 1913–1924.
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MINING ACTS.

Mining Act 1893–1922: Gold Dredging Act 1905.	Mining Act 1904–1921: Sluicing and Dredging for Gold Act 1899.	Mining Act 1917–1924: Aid to Mining Act 1924.
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RETURNED SOLDIERS' SETTLEMENT ACTS.

Discharged Soldiers' Settlement Act 1917–1923.	Discharged Soldiers' Settlement Act 1918–1919.	Returned Soldiers' Settlement Act 1916–1923.
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ADVANCES TO SETTLERS ACTS.

State Advances Act 1895–1924: Advances to Settlers on Crown Lands Act 1914–1916: Loans to Producers Act 1917–1924: Agricultural Graduates Land Settlement Act 1922: Crown Lands Act 1915–1919: Irriga- tion Act 1922–1924: Pas- toral Act 1904–1922: Dis- charged Soldiers' Settlement Act 1917–1923: Loans for Fencing Act 1919–1924	Agricultural Bank Act 1906–1922.	State Advances Act 1907–1923: Advances to Fruit-growers Act 1918–1921: Closer Settlement Act 1913–1924: Returned Sol- diers' Settlement Act 1916– 1923.
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5. **Administration and Classification of Crown Lands.**—In each of the States there is a Lands Department under the direction of a responsible Cabinet Minister who is charged generally with the administration of the Acts relating to the alienation, occupation and management of Crown lands. The administrative functions of most of the Lands Departments are to some extent decentralized by the division of the States into what are usually termed Land Districts, in each of which there is a Lands Office, under the management of a land officer, who deals with applications for selections and other matters generally appertaining to the administration of the Acts within the particular district. In some of the States there is also a local Land Board or a Commissioner for each district or group of districts. In the Northern Territory a Land Board, under the control of the Minister for Home and Territories, is charged with the general administration of the Lands Ordinance and of Crown lands in the Northern Territory. In the Federal Capital Territory the administration of the Leases Ordinances is in the hands of the Minister for Home and Territories.

Crown lands are generally classified according to their situation, the suitability of the soil for particular purposes, and the prevailing climatic and other conditions. The modes of tenure under the Acts, therefore, as well as the amount of purchase money or rent, and the conditions as to improvements and residence, vary considerably. The administration of special Acts relating to Crown lands is in some cases in the hands of a Board under the general supervision of the Minister, e.g., the Western Lands Board in New South Wales, the Lands Purchase and Management Board in Victoria, and the Closer Settlement Board in Tasmania.

In each of the States and in the Northern Territory there is also a Mines Department, which is empowered under the several Acts relating to mining to grant leases and licences of Crown lands for mining and auxiliary purposes.

6. **Classification of Tenures.**—The tabular statement which follows shows the several tenures under which Crown lands may be acquired or occupied in each State. In the Northern Territory perpetual leases of pastoral and agricultural land are granted, as well as miscellaneous leases, and grazing and occupation licences. The mining leases and holdings are similar to those of the States. In the Federal Capital Territory only city leases and leases of other land are issued.

STATE CROWN LANDS—TENURES.

New South Wales.	Victoria.	Queensland.
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FREE GRANTS, RESERVATIONS AND DEDICATIONS.

Free Grants : Reservations.	Free Grants : Reservations.	Free Grants : Reservations.
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UNCONDITIONAL PURCHASE OF FREEHOLD.

Auction Sales : After-auction Purchases : Special Purchases : Improvement Purchases : Pur- chases of Town Leases : Subur- ban Holdings : Returned Soldiers' Special Holdings : Residential Leases : Week-end Leases.	Auction Sales.	
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STATE CROWN LANDS—TENURES—*continued.*

New South Wales.

Victoria.

Queensland.

ACQUISITION OF FREEHOLD BY WAY OF CONDITIONAL PURCHASE.

Residential Conditional Purchases : Non-residential Conditional Purchases : Additional Conditional Purchases : Conversions into Conditional Purchases.

Residential Selection Purchase Leases : Non-residential Selection Purchase Leases : Licences of Auriferous worked-out Lands : Conditional Purchase Leases of Swamp or Reclaimed Lands : Selection Purchase Leases of Mallee Lands : Murray River Settlements : Special Settlement Areas : Conversions into Selection Purchase Leases.

LEASES AND LICENCES UNDER LAND ACTS.

Conditional Leases : Conditional Purchase Leases : Special Conditional Purchase Leases : Homestead Selections : Homestead Farms : Settlement Leases : Special Leases : Annual Leases : Scrub Leases : Snow Leases : Inferior Lands Leases : Crown Leases : Improvement Leases : Occupation Licences : Leases of Town Lands : Suburban Holdings : Week-end Leases : Residential Leases : Leases in Irrigation Areas : Western Lands Leases : Forest Leases : Forest Permits.

Perpetual Leases : Auriferous Lands Leases : Leases of Swamp or Reclaimed Lands : Perpetual Leases of Swamp or Reclaimed Lands : Grazing Licences : Perpetual Mallee Leases : Miscellaneous Leases and Licences : Bee Farm Licences : Bee Range Area Licences : Eucalyptus Oil Licences : Forest Leases : Forest Licences : Forest Townships.

Perpetual Lease Selections : Perpetual Lease Prickly-pear Selections : Pastoral Leases : Preferential Pastoral Leases : Prickly-pear Leases : Occupation Licences : Special Leases : Grazing Selections : Auction Perpetual Leases.

CLOSER SETTLEMENT.

Sales by Auction : After-auction Sales : Closer Settlement Purchases : Permissive Occupancies : Closer Settlement Promotion.

Sales of Land : Conditional Purchase Leases : Conditional Purchase Leases in Mountainous Areas.

Perpetual Lease Selections : Settlement Farm Leases : Perpetual Town, Suburban and Country Leases.

LEASES AND LICENCES UNDER MINING ACTS.

Holdings under Miners' Rights : Gold Mining Leases : Mineral Leases : Coal and Oil Mining Leases : Business Licences : Residence Areas.

Holdings under Miners' Rights : Gold Mining Leases : Mineral Leases : Business Areas : Residence Areas.

Holdings under Miners' Rights : Permits to Prospect for Petroleum : Petroleum Leases : Licences to Prospect for Coal or Mineral Oil : Gold Mining Leases : Mineral Leases : Business Areas : Residence Areas : Miners' Homestead Perpetual Leases.

SETTLEMENT OF RETURNED SOLDIERS AND SAILORS.

Returned Soldiers' Special Holding Purchases : Returned Soldiers' Group Purchases : Returned Soldiers' Special Holding Leases.

(Same Tenures as under the Land and Closer Settlement Acts).

Perpetual Lease Selections : Perpetual Town and Suburban Leases.

STATE CROWN LANDS—TENURES—*continued.*

South Australia.	Western Australia.	Tasmania.
FREE GRANTS, RESERVATIONS, AND DEDICATIONS.		
Free Grants : Reservations.	Free Grants : Reservations.	Free Grants : Reservations.
UNCONDITIONAL PURCHASE OF FREEHOLD.		
Auction Sales.	Auction Sales.	Auction Sales : After-auction Sales : Sales of Land in Mining Towns.
ACQUISITION OF FREEHOLD BY WAY OF CONDITIONAL PURCHASE.		
Agreements to Purchase : Special Agreements to Purchase (40 years' term) : Homestead Blocks.	Conditional Purchases with Residence : Conditional Purchases without Residence : Conditional Purchases by Direct Payment : Conditional Purchases of Land for Vineyards, etc. : Conditional Purchases of Inferior Lands : Conditional Purchases by Pastoral Lessees : Conditional Purchases of Grazing Lands : Homestead Farms : Village Allotments : Workingmen's Blocks : Special Settlement Leases.	Selections for Purchase : Additional Selections for Purchase : Homestead Areas. Selections in Mining Areas. Sales by Auction : Sales by Private Contract : After-auction Sales : Special Settlement Areas.
LEASES AND LICENCES UNDER LAND ACTS.		
Perpetual Leases : Special Perpetual Leases (Free Period) : Perpetual Leases of Homestead Blocks : Miscellaneous Leases : Grazing and Cultivation Leases : Licences : Licences of Resumed Land : Pastoral Leases : Leases to Discoverers of Pastoral Country : Special Leases to Discoverers of Water : Irrigation Blocks : Town Allotments in Irrigation Areas : Forest Leases.	Pastoral Leases : Special Leases : Residential Leases : Leases of Town and Suburban Lands : Irrigation Leases : Forest Leases.	Grazing Leases : Pastoral Leases : Leases of Land covered with Button Grass, etc. : Leases of Mountainous Land : Miscellaneous Leases : Temporary Licences : Occupation Licences : Residence Licences : Business Licences : Forest Leases, Licences and Permits.
CLOSER SETTLEMENT.		
Sales by Auction : Agreements to Purchase : Miscellaneous Leases.	Conditional Purchases : Town and Suburban Areas.	Leases with Right of Purchase : Special Sales.
LEASES AND LICENCES UNDER MINING ACTS.		
Holdings under Miners' Rights : Search Licences : Occupation Licences : Gold Leases : Mineral Leases : Business Areas : Residence Areas.	Holdings under Miners' Rights : Gold Mining Leases : Mineral Leases : Business Areas : Residence Areas : Miners' Homestead Leases.	Holdings under Miners' Rights : Prospectors' Licences : Gold Mining Leases : Mineral Leases.
SETTLEMENT OF RETURNED SOLDIERS AND SAILORS.		
Perpetual Leases : Agreements to Purchase.	Ordinary Tenure : Special Tenure.	Free Grants : Ordinary Tenure : Special Tenure.

§ 2. Free Grants, Reservations, and Dedications.

1. *New South Wales.*—(i) *Free Grants.* Crown lands may, by notification in the *Gazette*, be dedicated for public purposes and be granted therefor in fee-simple. Such lands may be placed under the care and management of trustees, not less than three in number, appointed by the Minister.

(ii) *Reservations.* Temporary reservations of Crown lands from sale or lease may be made by the Minister.

(iii) *Areas Granted and Reserved.* During the year 1923-24, the total area for which free grants were prepared was 1,313 acres, including grants of 1,252 acres of land resumed under the 12th clause of the Public Roads Act 1902. During the same period 2,391 acres were dedicated and permanently reserved, the number of separate dedications being 104.

On the 30th June, 1924, the total area temporarily reserved was 19,206,926 acres, of which 5,390,222 acres were for travelling stock, 3,412,517 acres for forest reserves, 765,214 acres for water, 1,389,900 acres for mining, and the remainder for temporary commons, railways, recreation and parks, and miscellaneous purposes.

2. *Victoria.*—(i) *Free Grants.* The Governor may grant, convey or otherwise dispose of Crown lands for public purposes.

(ii) *Reservations.* The Governor may temporarily or permanently reserve from sale, lease or licence any Crown lands required for public purposes, and may except any area of Crown lands from occupation for mining purposes or for residence or business under any miner's right or business licence.

(iii) *Areas Granted and Reserved.* During the year 1923, 128 acres were granted without purchase and reservations of both a permanent and temporary nature, comprising a net area of 7,168 acres, were made. At the end of 1923, the total area reserved was 7,332,061 acres, consisting of roads, 1,777,319 acres; water reserves, 314,616 acres; agricultural colleges, etc., 85,590 acres; permanent forests and timber reserves under Forests Act, 4,124,138 acres; forests and timber reserves under Land Acts, 329,600 acres; reserves in the Mallee, 397,881 acres; and other reserves, 302,917 acres.

3. *Queensland.*—(i) *Free Grants.* The Governor may grant in trust any Crown land, which is or may be required for public purposes. Under the Irrigation Act, land to be used for the purpose of any undertaking under that Act may be vested in fee-simple in the Irrigation Commission.

(ii) *Reservations.* The Governor may reserve from sale or lease, either temporarily or permanently, any Crown land which is or may be required for public purposes. Reserved lands may be placed under the control of trustees who are empowered to lease the same for not more than 21 years with the approval of the Minister.

Under the State Forests and National Parks Act, the Governor may permanently reserve any Crown Lands and declare them to be a State Forest or a National Park.

(iii) *Areas Granted and Reserved.* During the year 1924, 16 free grants were issued, the total area thereof being 136 acres. During the same period the area of reserves cancelled was 627,985 acres less than the area set apart as reserves. The total area reserved up to the end of 1924 was 17,239,329 acres, made up as follows:—timber reserves, 3,173,058 acres; State forests and national parks, 1,703,267 acres; for use of aborigines, 6,096,168 acres; and general, 6,266,836 acres.

4. *South Australia.*—(i) *Free Grants.* The Governor may dedicate Crown lands for any public purpose and grant the fee-simple of such lands, with the exception of foreshores and land for quays, wharfs or landing-places, which are inalienable in fee-simple from the Crown.

(ii) *Reservations.* The Governor may reserve Crown lands for (a) the use and benefit of aborigines, (b) military defence, (c) forest reserves, (d) railway stations, (e) park lands, or (f) any other purpose that he may think fit.

(iii) *Areas Granted and Reserved.* During the year 1924 free grants were issued for a total area of 76 acres. During the same year reserves comprising 21,416 acres were proclaimed. At the end of 1924 the total area reserved was 16,276,591 acres.

5. *Western Australia.*—(i) *Free Grants.* The Governor may dispose of in such manner as for the public interest may seem best any lands vested in the Crown for public purposes, and may grant the fee-simple of any reserve to secure the use thereof for the purpose for which such reserve was made.

(ii) *Reservations.* The Governor may reserve any lands vested in the Crown for public purposes. Areas not immediately required may be leased from year to year. Reserves may be placed under the control of a local authority or trustees, with power to lease them for a period not exceeding 21 years, or may be leased for 99 years. Temporary reserves may also be proclaimed.

(iii) *Areas Granted or Reserved.* During the year 1924, a few small areas of land were granted in fee-simple, and 162,834 acres were reserved for various purposes.

6. *Tasmania.*—(i) *Free Grants.* The only mention in the Crown Lands Act respecting free grants of land is that the Governor may agree with the Governor-General of the Commonwealth for the grant of any Crown land to the Commonwealth, and it is expressly stated that no lands may be disposed of as sites for religious purposes except by way of sale under the Act.

(ii) *Reservations.* The Governor in Council may except from sale or lease, and reserve to His Majesty any Crown land for public purposes, and vest for such term as he thinks fit any land so reserved in any person or corporate body. Any breach or non-fulfilment of the conditions upon which such land is reserved renders it liable to forfeiture. A school allotment, not exceeding 5 acres in area, may also be reserved.

(iii) *Areas Granted or Reserved.* During the year ended 31st December, 1923, the area granted free was 15,373 acres, nearly all of which was granted to soldiers under the Returned Soldiers' Settlement Act, while during the same year, 6 free leases were issued to local public bodies for municipal purposes, and 15,333 acres were reserved, of which 15,160 acres were reserved for a forest reserve, 140 acres for recreation purposes, 25 acres for a gravel reserve, 5 acres for a hospital reserve, 2 acres for hall site purposes, and 1 acre for abattoir purposes. The total area reserved to the end of 1923 was 4,995,333 acres.

7. *Northern Territory.*—(i) *Reservations.* The Governor-General may resume for public purposes any Crown lands, not subject to any right of or contract for purchase, and may reserve, for the purpose for which they are resumed, the whole or any portion of the land so resumed.

(ii) *Areas Reserved.* The area of land held under reserve at the end of 1923 was 37,391 square miles.

§ 3. Unconditional Purchases of Freehold.

1. *New South Wales.*—(i) *Auction Sales.* Crown lands, not exceeding in the aggregate 200,000 acres in any one year, may be sold by public auction in areas not exceeding half-an-acre for town lands, 20 acres for suburban lands, and 640 acres for country lands, at the minimum upset price of £8, £2 10s., and 15s. per acre respectively. At least 10 per cent. of the purchase-money must be paid at the time of sale, and the balance within 3 months, or the Minister may allow the payment of such balance to be deferred for a period not exceeding 10 years, 5 per cent. interest being added. Town blocks in irrigation areas may also be sold by auction.

(ii) *After-auction Purchases.* In certain cases, land offered at auction and not sold may be purchased at the upset price, but one-quarter of the purchase-money must be paid immediately, and the balance as notified in the *Gazette*. Any such application is, however, subject to the approval of the Minister.

(iii) *Special Purchases.* Under certain circumstances, land may be sold in fee-simple, the purchaser paying the cost of survey and of reports thereon, in addition to the purchase-money.

(iv) *Improvement Purchases.* The owner of improvements in authorized occupation by residence under any Mining or Western Lands Act of land within a gold field or mineral field may purchase such land without competition at a price determined by the local land board, but at not less than £8 per acre for town lands or £2 10s. per acre for other lands. The area must not exceed $\frac{1}{2}$ acre within a town or village, or 2 acres elsewhere, and no person may purchase more than one such area within 3 miles of a similar prior purchase by him.

(v) *Purchases of Residential Leases.* A holder of a residential lease (including any additional residential lease) may, after the expiration of the first 5 years of his lease, apply to purchase the land held thereunder. The local land board fixes the price and reports to the Minister, who may either grant or refuse the application. No person may hold more than one such purchase.

(vi) *Purchases of Week-end Leases and Town Lands Leases.* The holder of a week-end lease or of a town lands lease may apply to purchase the land comprised therein, and the Minister may either grant or refuse such application. The price is the capital value of the land at the date of application and is determined by the local land board. The purchase money must be paid within 3 months, or within such further period as the Minister may determine.

(vii) *Purchases of Suburban Holdings.* The land contained within a suburban holding may, with the consent of the Minister, be purchased by the holder thereof, on payment of the purchase-money in ten equal annual instalments with $2\frac{1}{2}$ per cent. interest. The value of the land is fixed by the local land board, and the purchase is subject to the condition of residence on the land for 5 years from the date of taking up the suburban holding. No transfer of land so purchased may be made without the consent of the Minister.

(viii) *Areas Sold by Auction and Special Purchases.* During the year ended 30th June, 1924, the total area sold was 4,711 acres, of which 2,134 acres were sold by auction and 458 acres after having been withdrawn from auction, while 20 acres were sold as improvement purchases and 2,099 acres as special purchases. The amount realized for the sale of the whole area was £62,606.

2. *Victoria.*—(i) *General.* Lands specially classed for sale by auction may be sold by auction in fee-simple, not exceeding 100,000 acres in any one year, at an upset price of £1 an acre, or at any higher price determined. The purchaser must pay the survey-fee at the time of the sale, together with a deposit of $12\frac{1}{2}$ per cent. of the whole price; the residue is payable in equal half-yearly instalments with interest. Any unsold land in a city, town or borough, areas specially classed for sale, isolated pieces of land not exceeding 50 acres in area, and sites for churches or charitable purposes, if not more than 3 acres in extent, may be sold by auction on the same terms. Swamp or reclaimed lands may also be sold by auction, subject to the condition that the owner keeps open all drains, etc., thereon.

(ii) *Areas Sold at Auction and by Special Sales.* During the year 1923, a total of 2,052 acres was disposed of under this tenure, 1,284 acres being country lands, while 768 acres of town and suburban lands were sold by auction.

3. *Queensland.*—Since the end of 1916, land, not already conditionally acquired, cannot be alienated to selectors in fee-simple.

4. *South Australia.*—(i) *Sales by Auction.* The following lands may be sold by auction for cash :—(a) special blocks, (b) Crown lands which have been offered for lease and not taken up within 2 years, (c) town lands, and (d) suburban lands, which the Governor excepts from the operations of the Land Board. A purchaser must pay 20 per cent. of the purchase-money in cash, and the balance within one month or within such extended time as the Commissioner of Crown lands may allow. Town lands may be sold subject to the condition that they cannot be transferred or mortgaged for 6 years.

(ii) *Areas Sold, etc.* During the year ended 30th June, 1924, the area of town lands sold by auction was 87 acres. In addition 26,891 acres were sold at fixed prices, and the purchases of 48,892 acres on credit were completed, making a total of 75,870 acres.

5. *Western Australia.*—(i) *Sales by Auction.* Town, suburban, and village lands, after being surveyed into lots and notified in the *Gazette*, must be sold by auction. Ten per cent. of the purchase money must be paid in cash, together with the value of any improvements, and the balance in four equal quarterly instalments. Suburban land must be fenced within 2 years, and until that is effected, no Crown grant may be issued.

(ii) *Areas Sold.* During the year ended 30th June, 1924, the area of town and suburban allotments sold was 2,588 acres in 1,043 allotments.

6. *Tasmania.*—(i) *Sales by Auction.* Town lands may be sold by auction for cash or on credit, no conditions being imposed beyond the payment of the purchase-money. No town land, the price of which is less than £15, may be sold on credit.

(ii) *After-auction Sales.* Town lands, not within 5 miles of any city, which, after having been offered at auction, have not been sold, may be sold at the upset prices by private contract.

(iii) *Sales of Land in Mining Towns.* Any town land in a mining area may be sold by auction for cash, provided that any person, being the holder of a residence licence or business licence in lawful occupation of a residence area or business area and the owner of permanent improvements of a value equal to or greater than the upset price, is entitled to purchase such area at the upset price, prior to the sale by auction. The upset price of the unimproved value must not be less than £10 and the area must not exceed $\frac{1}{2}$ acre.

(iv) *Areas Sold.* During the year 1923 the area sold by auction or by special sale amounted to 362 acres, as against 548 acres for the previous year.

4. Acquisition of Freehold by way of Conditional Purchase.

1. *New South Wales.*—(i) *Residential Conditional Purchases.* Crown lands, not within certain areas, and not leased or reserved, are open to conditional purchase at the price of 20s. per acre, if not otherwise gazetted. The maximum area which may be conditionally purchased is 1,280 acres in the Eastern Division, and 2,560 acres in the Central Division, and the minimum area is 40 acres. In a special area, the areas are such as are gazetted. These areas may, however, be exceeded in certain circumstances by additional holdings out of areas set apart for the purpose in order to make up a home-maintenance area. Every application must be accompanied by a deposit of 5 per cent. of the price of the land, together with the amount of survey-fee or an instalment thereof, and the necessary stamp duty. The balance of the purchase-money is payable in instalments of 5 per cent. of the price of the land with $2\frac{1}{2}$ per cent. interest, such instalments and interest being payable annually after the end of the third year from the date of application. The following conditions are attached to the holding :—(a) the holder must reside thereon for 5 years, (b) the boundaries must be fenced within 3 years after

the confirmation of the application, and such fence must be maintained for a period of 5 years from such confirmation; or, alternatively, (c) improvements must be made within 3 years to the value of not less than 6s. per acre and within 5 years 10s. per acre, but the value of such improvements need not exceed £384 or 30 per cent. of the value of the land within 3 years, and £640 or 50 per cent. within 5 years. A Crown grant in fee-simple is issued when all the conditions have been complied with, and the balance of the purchase-money and stamp duty and deed fee have been paid.

(ii) *Non-residential Conditional Purchases.* Crown lands, which are open to ordinary conditional purchase, may be conditionally purchased without the condition of residence subject to the following conditions:—(a) the area must not exceed 320 acres, (b) the applicant must be not less than 21 years of age, (c) no person, except with the consent of the Minister, may make a subsequent purchase, except as an additional conditional purchase which, together with the original purchase, must not exceed 320 acres, (d) the price is double that payable for the same land as a residential purchase, and the deposit is 2s. for each pound of purchase money, the balance of which is payable after the third year in annual instalments of 2s. per pound or of 9d. in the pound of the full purchase-money with $2\frac{1}{2}$ per cent. interest, and (e) the boundaries must be fenced within 12 months and not less than £1 per acre expended within 5 years on other permanent improvements. Fencing may be dispensed with subject to other approved improvements being effected to the value of 30s. per acre within 5 years after confirmation of the application.

(iii) *Additional Conditional Purchases.* An applicant or holder of an original conditional purchase and a holder of a freehold (not in the Western Division) containing not less than 40 acres, and which does not constitute a home maintenance area, may, subject to certain conditions, apply for an additional conditional purchase, but the whole area contained in the original purchase and in the additional purchase together must not exceed that allowed for an ordinary conditional purchase, and is subject to the same conditions.

(iv) *Conversions of Leases into Conditional Purchases, etc.* (a) The holder of a conditional lease may convert the whole or part of the land comprised therein into an additional conditional purchase.

(b) A conditional purchase lease may be converted into a conditional purchase on payment of 5 per cent. deposit on the capital value of the land and the balance in equal annual instalments of 5 per cent. of the purchase-money with interest at $2\frac{1}{2}$ per cent. Such conditional purchase is subject to all the unfulfilled conditions of the lease, except that of the payment of rent. It may also be converted into a homestead farm.

(c) A non-residential conditional purchase may be converted into an ordinary conditional purchase, the period of residence being reduced by the period resided, if any, under the former holding.

(d) The holder of a special lease or of an agricultural or pastoral lease granted under the Church and School Lands Dedication Act may apply to convert his holding into a conditional purchase or an additional conditional purchase, or into certain other specified tenures.

(e) A homestead selection or homestead farm may be converted into a conditional purchase subject to any special provisions attached to the original holding, and to the general provisions respecting conditional purchases. The term of residence is reduced by the period of continuous residence on the original holding. The deposit and payment of purchase-money are the same as in the conversion of a conditional purchase lease (see (b)). A homestead selection or homestead farm may also be converted into a conditional purchase lease or a conditional purchase with an associated conditional lease.

(f) The holder of a Crown lease (unless debarred by notification setting the land apart) or of a settlement lease may convert such lease into a conditional purchase, provided that the total area held by the applicant and his wife does not exceed that of a home maintenance area. Where such area is in excess of a home maintenance area, the non-convertible part may be held as a conditional lease. The terms of payment and conditions are the same as in other cases of conversion.

(v) *Areas Alienated as Conditional Purchases.* At the 30th June, 1924, the total number of conditional purchases in existence was 71,202, covering an area of 18,122,045 acres. The following table gives particulars of conditional purchases from 1919-20 to 1923-24 :—

CONDITIONAL PURCHASES, NEW SOUTH WALES, 1919-20 TO 1923-24.

Year ended 30th June—	Applications made. (a)		Applications Confirmed. (a)		Areas for which Deeds have been Issued.	
	Number.	Area.	Number.	Area.	During the Year.	To end of Year.
		Acres.	Acres.	Acres.	Acres.	Acres.
1920	773	126,179	257	35,612	686,385	18,564,288
1921	533	90,573	480	78,461	664,522	19,228,810
1922	311	59,878	424	70,233	741,263	19,970,073
1923	361	69,524	200	34,453	667,073	20,637,146
1924	379	70,784	291	41,117	596,124	21,233,270

(a) Exclusive of conversions from other tenures.

2. *Victoria.*—(i) *Residential Selection Purchase Leases.* A person may select from land notified in the *Gazette* as available, a selection purchase lease, the maximum area of which ranges from 200 acres of first class land to 2,000 acres of Class 4A land. The annual rental varies from 1s. per acre in the case of first class land to 2½d. in the case of Class 4A land, for a period of 20 years, or half those rates for 40 years. Certain specified conditions must be complied with and improvements effected during the first 6 years, and the selector is required to reside on the property for 5 years and may not transfer the same during the first 6 years. At any time after the expiration of 6 years, provided that all the conditions have been fulfilled, and the balance of the purchase money has been paid, a Crown grant may be obtained.

(ii) *Non-residential Selection Purchase Leases.* These leases are similar to the preceding with the exceptions that (a) the provision for payment during 40 years is omitted, (b) there is no residential condition, and (c) the value of the improvements to be effected is double that of those on a residential lease.

(iii) *Licences of Worked-out Auriferous Lands.* A person may obtain a licence to occupy an allotment of not more than 5 acres of worked-out auriferous lands for a period not exceeding 7 years and to a depth of not more than 50 feet, at a rental of not less than 1s. per acre per annum. Such licences contain conditions prescribed by the Governor. If the licensee has complied with all the conditions of his licence for a period of 7 years he is entitled to a Crown grant on payment of the purchase-money which is fixed by the Board of Land and Works at not less than £1 per acre, from which is deducted the amount paid in licence fees.

(iv) *Conditional Purchase Leases of Swamp or Reclaimed Lands.* A conditional purchase lease of swamp or reclaimed lands covers such term as may be agreed upon between the lessee and the Board of Land and Works, and provides for the payment of the value of the allotment with interest at the rate of 4½ per cent., by 63 half-yearly instalments. The lessee must keep open all drains, etc., and make improvements to the value of 10s. per acre in each of the first 3 years, but need not reside on the land.

(v) *Selection Purchase Leases of Mallee Lands.* The terms and conditions attached to these leases are the same as those attached to ordinary selection purchase leases, but the areas may be larger, ranging from 640 acres of first class land to 4,000 acres of Class 4A land. The lessee must also, within 2 years, clear and cultivate at least one-fourth of his holding, and make provision for the storage of water.

(vi) *Murray River Settlements.* Crown lands near the River Murray may be subdivided into allotments not exceeding 50 acres each and taken up as conditional purchase leases. The value of the land is payable in 63 half-yearly instalments with not less than 4½ per cent. interest. Residential and improvement conditions are laid down, and after 12 years, if they have been complied with, a Crown grant may be obtained.

(vii) *Special Settlement Areas.* Crown land, upon which expenditure has been made by the Crown, may be set apart as a special settlement area, and surveyed into allotments not exceeding 200 acres each. Such allotments may be taken up as conditional purchase leases, but every Crown grant contains a condition that the land shall at all times be maintained and used for the purpose of agriculture, and the holder must reside thereon.

(viii) *Conversion of Perpetual Leases into Selection Purchase Leases.* A perpetual lease may, with the consent of the Board of Land and Works, be surrendered by the lessee, and a selection purchase lease (residential or non-residential) obtained in lieu thereof.

(ix) *Conversion of Auriferous Lands Licences into Selection Purchase Leases.* If the Minister of Mines consents, the Board may grant to the licensee of an auriferous lands licence a selection purchase lease in lieu thereof, provided that the land is improved to the value of £1 per acre and the occupation is *bona fide*.

(x) *Areas Purchased Conditionally.* The subjoined table gives particulars of the areas selected conditionally from 1919 to 1923:—

AREAS PURCHASED CONDITIONALLY, VICTORIA, 1919 TO 1923.

(EXCLUSIVE OF SELECTION IN THE MALLEE COUNTRY.)

Particulars.	1919.	1920.	1921.	1922.	1923.
	Acres.	Acres.	Acres.	Acres.	Acres.
With residence	76,003	79,461	72,752	133,083	122,614
Without residence	6,635	23,050	26,767	53,603	77,903
Total	82,638	102,511	99,519	186,686	200,517
No. of selectors	698	710	431	741	791

3. *Queensland.*—The granting of freehold tenure having been abolished at the end of 1916, only those lands which are held under any form of conditional purchase tenure granted before the beginning of 1917 can be converted into freehold. Land cannot be taken up under any form of conditional purchase

4. *South Australia.*—(i) *Agreements to Purchase.* Crown lands (except town lands) which have been surveyed or of which the boundaries have been delineated in the public maps, may be offered on agreement to purchase. The area which is to be cleared and rendered available for cultivation, and the payments to be made, are notified in the *Gazette*. An application must be accompanied by a deposit of an amount equal to the first half-yearly instalment of purchase money. The whole purchase money is payable in 60 equal half-yearly instalments of not less than 2 per cent. thereof. Preference is given in allotting land to the applicant who agrees to reside on the land for 9 months in each year. If no application is made within 3 months from the date of notification, the Commissioner may offer the land at a reduced price. No agreement may be granted to any person in the case of land the unimproved value of which exceeds £5,000, nor in such manner that the purchaser would hold lands under any tenure, except pastoral lease, of which the aggregate unimproved value would exceed that sum, excepting in cases where the land is suitable for pastoral purposes only, under which circumstances no agreement to purchase is granted if the carrying capacity of the unimproved land and of all other lands held by the applicant would exceed 5,000 sheep, or, if outside Goyder's line of rainfall, 10,000 sheep. The purchaser must fence in the land within 5 years and comply with specified conditions respecting improvements, and, after 6 years, if all the conditions have been complied with and the balance of the purchase money paid, may complete the purchase.

(ii) *Special Agreements to Purchase.* Where the Commissioner directs, the following provisions for payment are made:—(a) No instalments are payable during the first 4 years; (b) from the end of the fourth to the end of the tenth year, each instalment is to be

at the rate of 2 per cent. of the value of the land, and is to be regarded as interest only; (c) from the end of the tenth year, the interest included in the instalments is at the rate of 4 per cent. on the value of the land; and (d) the agreement is for 40 years, and the purchase money is to be paid in 60 half-yearly instalments at the rate of £2 16s. 5d. for every £100 of the purchase money, including interest, the payment of such instalments to commence after the end of the tenth year.

(iii) *Homestead Blocks.* Any Crown lands and any lands which the Commissioner may acquire as suitable for homestead blocks may be surveyed and offered as homestead blocks, provided that the unimproved value of the fee-simple of a block does not exceed £100 and that no block is sold for a sum less than the amount paid therefor by the Government, together with the cost of offering the same. A homestead block may be held under an agreement to purchase, but only by a person gaining his livelihood by his own labour, and the holder must reside thereon for 9 months in each year. Such a block may be protected from encumbrance or seizure, if endorsed by the Commissioner as a "Protected Homestead Block."

(iv) *Lands Allotted.* The following table gives the areas of the lands allotted under Agreements to Purchase, exclusive of lands for Soldier Settlement, during the years 1919-20 to 1923-24. No Homestead Blocks have been allotted during that period.

AGREEMENTS TO PURCHASE, SOUTH AUSTRALIA, 1919-20 TO 1923-24.

Particulars.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
	Acres.	Acres.	Acres.	Acres.	Acres.
Eyre's Peninsula Lands	46,958	89,052	65,277	50,005	111,456
Murray Lands	28,906	48,625	34,606	36,104	50,745
Pinnaroo Lands	36,507	30,166	15,834	11,886	44,291
Closer Settlement Lands	25,720	6,176	25,255	9,096	7,302
Homestead Lands (repurchased) ..	5	72	9	12	19
Buckleboo Railway Lands .. ..	..	..	..	..	5,680
Other Crown Lands	9,022	42,642	6,875	11,619	17,160
Total	147,118	216,733	147,856	118,722	236,653

5. *Western Australia.*—(i) *General.* Agricultural land is divided into two classes—cultivable and non-cultivable. The maximum area to be held by any one person is 1,000 acres of the former or 5,000 acres of the latter, or the equivalent of cultivable and non-cultivable land.

(ii) *Conditional Purchases with Residence.* Land may be disposed of subject to the following conditions:—(a) The price is fixed by the Governor, with a minimum of 3s. 9d. and a maximum (except with special approval) of 15s. per acre, the lease to be from 25 to 30 years; (b) the maximum area which one person may hold is 1,000 acres, and the minimum, except in approved cases, 100 acres; (c) 7 per cent. of the survey-fee to be paid in the first 5 years of the lease, and the survey-fee with interest and purchase-money to be paid over the balance of the term; (d) the lessee must reside on the lease for 6 months in each year for the first 5 years; (e) the lessee must expend on prescribed improvements an amount equal to one-fifth of the purchase-money in every 2 years for the first 10 years of his lease, and fence one-half of the holding within 5 years and the whole within 10 years; and (f) at any time after 5 years, provided that all conditions have been complied with and the full purchase-money and fee paid, the Crown grant will issue.

(iii) *Conditional Purchases without Residence.* Land may be disposed of without the residence condition, subject to all the other conditions prescribed in the previous paragraph, except that the amount to be expended on improvements must be a sum equal to the amount of purchase-money, with 50 per cent. added thereto.

(iv) *Conditional Purchases by Direct Payment.* Land may also be disposed of without residence conditions, subject to the following :—(a) The price is fixed by the Governor, but at not less than 10s. per acre, payable within 12 months or sooner; (b) the application must be accompanied by a deposit of 10 per cent. of the purchase money, and, if accepted, a licence is issued for 7 years; (c) the balance of the purchase money must be paid in 4 equal quarterly instalments within 12 months; (d) the lessee must fence in the whole of the land within 3 years, and must expend 10s. per acre on improvements in 7 years; and (e) when all the conditions have been fulfilled, and the full purchase money and fee paid, a Crown grant must be issued.

(v) *Conditional Purchases of Land for Vineyards, Orchards, and Gardens.* The Governor may declare any Crown lands open for selection for vineyards, orchards, and gardens, subject to the following conditions :—(a) The price must be not less than 10s. per acre; (b) 10 per cent of the purchase-money must be deposited with the application, and if the latter is accepted, a licence is issued for 3 years; (c) the balance of the purchase-money must be paid in half-yearly instalments within 3 years; (d) the maximum area held by one person must not exceed 50 acres, and the minimum not less than 5 acres; (e) the lessee must within 3 years fence in the whole of the land and plant at least one-tenth thereof with vines or fruit trees or cultivate one-tenth as a vegetable garden; and (f) on completion of the conditions, and payment of the purchase-money, a Crown grant must be issued.

(vi) *Conditional Purchases of Inferior Lands.* Land which is classed as inferior and second or third class land may also be sold under the conditions mentioned in previous paragraphs, but the price may be reduced to not less than 3s. 9d. per acre, and that of land infested with poison plant may be reduced in price to not less than 1s. per acre.

(vii) *Conditional Purchases by Pastoral Lessees.* A pastoral lessee in the South-West Division may apply for land within his lease not exceeding one-fifth of the area leased by him under conditional purchase, with residence condition, and may hold a maximum area of 2,000 acres, and a minimum area of 200 acres. Similarly, a pastoral lessee in the Kimberley, North-West, Eastern or Eucla Divisions, who has in his possession at least 10 head of sheep or 1 head of large stock for each 1,000 acres, may apply to purchase an area not exceeding 1 per cent. of the total area held by him, the maximum area which may be so selected being 2,000 acres, and the minimum 500 acres.

(viii) *Conditional Purchases of Grazing Lands.* The Governor may declare lands situated in the South-West, Central or Eucla Divisions, which are unsuitable for agriculture, open for selection under the following conditions :—(a) The price must be not less than 3s. 9d. per acre; (b) the maximum area which can be held by any one person is 5,000 acres, and the minimum 100 acres; (c) on approval of the application, accompanied by a deposit of the first instalment of purchase money, a lease for 25 years is issued; (d) the lessee must reside on the lease for 6 months in the first year, and for 9 months in each of the succeeding 4 years; (e) the lessee must expend on improvements an amount equal to one-fifth of the purchase money in every 2 years; and (f) when all the conditions have been fulfilled, and the purchase money and fee paid, a Crown grant must be issued.

(ix) *Homestead Farms.* Crown lands, not within a goldfield, may be made available for free farms, termed "Homestead Farms." Any person, not already the holder of more than 100 acres of freehold land, or land held under special occupation or conditional purchase, is entitled to a homestead farm of not more than 160 acres or less than 10 acres. A fee of £1 must be paid with the application, and an approved applicant receives an occupation certificate for 7 years, and neither the land nor any interest therein of the selector is liable to be taken in execution. A selector must comply with the following conditions :—(a) Reside for 6 months in each year on the land for the first 5 years; (b) within 2 years expend not less than 4s. per acre on the total area; (c) within 5 years expend 10s. per acre; (d) within 7 years expend 14s. per acre on improvements and a house; and (e) fence one-half within 5 years, and the whole within 7 years. After 7 years a selector is entitled to a Crown grant, provided all conditions are fulfilled, or at any time after 12 months, provided all improvements are made, a Crown grant may be obtained on payment of a sum of 5s. per acre.

(x) *Village Allotments.* In connexion with any land set apart for selection as homestead farms, the Governor may declare any land within 5 miles thereof a village site, and such site may be subdivided into allotments not exceeding in area 1 acre each. Any selector of a homestead farm may select an allotment in such village without payment. As soon as the selector is entitled to a Crown grant of his homestead farm, he may, on payment of £1 and the prescribed fee, obtain a Crown grant of his village allotment.

(xi) *Working Men's Blocks.* Land may be set apart for working men's blocks and subdivided into lots not exceeding $\frac{1}{2}$ -acre each on a goldfield, or 5 acres elsewhere. Any person who is not already an owner of land in freehold or on conditional purchase, may obtain a lease under the following conditions:—(a) The price must be not less than £1 per acre, payable at the rate of one-tenth of the purchase money annually; (b) one person may hold one allotment only; (c) the application must be accompanied by the first instalment of purchase-money, and, if approved, a lease for 10 years is issued; (d) the lessee must reside on the block for 9 months in each of the first 5 years; (e) the land must be fenced in within 3 years, and improvements, in addition, made within 5 years equal in value to double the purchase-money; and (f) after 5 years a Crown grant must be issued, provided all conditions are complied with and the purchase-money and fee paid.

(xii) *Special Settlement Lands.* Land may be set apart as special settlement lands, and may be cleared, drained, or otherwise improved by the Government, and disposed of under the provisions of any preceding conditional purchase tenures.

(xiii) *Areas Alienated.* The following table shows the number of holdings and the areas conditionally selected for which Crown grants were issued and conditionally alienated during the years ending 30th June, 1920 to 1924. Under the heading "Deferred payments (with residence)" are included conditional purchases of grazing lands.

CONDITIONAL PURCHASES.—WESTERN AUSTRALIA, 1919-20 TO 1923-24.

Particulars.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
NUMBER OF HOLDINGS.					
	No.	No.	No.	No.	No.
Crown Grants Issued ..	1,416	1,269	1,995	1,553	1,557
Conditionally Alienated ..	2,622	2,220	3,275	2,997	2,889

AREAS FOR WHICH CROWN GRANTS WERE ISSUED.

	Acres.	Acres.	Acres.	Acres.	Acres.
Free Homestead Farms ..	113,630	65,286	112,798	53,506	40,080
Conditional Purchases ..	129,207	435,387	287,669	272,436	285,635

AREAS CONDITIONALLY ALIENATED.

	Acres.	Acres.	Acres.	Acres.	Acres.
Conditional Purchases—					
(i) Deferred Payments (with Residence) ..	1,143,240	1,460,085	1,635,911	1,619,346	1,693,342
(ii) Deferred Payments (without Residence) ..	114,094	131,331	139,602	95,011	46,380
(iii) Direct Payments (without Residence) ..	127	363	721	1,121	3,317
Free Homestead Farms ..	53,550	65,285	78,310	111,202	90,745
Working Men's Blocks ..	5	10	38	..	..
Total ..	1,311,016	1,657,074	1,854,582	1,826,680	1,833,784

6. *Tasmania.*—(i) *Selections for Purchase.* Rural land is classified into (a) first class land if its value is £1 an acre or over, (b) second class land if less than £1 but not less than 10s. an acre, and (c) third class land, if less than 10s. and not less than 5s. an acre, provided that no Crown land within the area and during the currency of a pastoral lease may be sold at less than 10s. per acre. Any person may select for purchase (a) one lot of first class land, not exceeding 200 acres nor less than 15 acres, on payment of a small deposit and the balance of the purchase money in instalments spread over 24 years, provided that he is not the holder upon credit of any first class land or of any unclassified rural land, for which the whole of the purchase money has not been paid, or (b) at the value per acre fixed by the Surveyor-General one lot of second class land, not exceeding 300 acres nor less than 30 acres, provided that he is not the holder upon credit of any second class land for which the whole of the purchase-money has not been paid, or (c) at the value per acre fixed by the Surveyor-General, one lot of third class land, not exceeding 600 acres nor less than 60 acres, provided that he is not the holder upon credit of any third class land for which the whole of the purchase-money has not been paid. The terms of purchase are as follows:—a sum equal to one-third of the price is added thereto by way of premium allowed for credit, and the whole sum is payable by a small deposit in the case of (a) or by a deposit of one-fortieth part thereof in the case of (b) and (c), and the balance in 18 and 14 annual instalments respectively. The following conditions must be observed:—(a) a purchaser of first class land must during 8 consecutive years improve the land to the extent of 2s. 6d. per acre annually, and the land must be occupied for 5 years either by himself, a member of his family, or someone employed by him, and (b) on second and third class land, improvements must be effected during 5 consecutive years to the value of 1s. per acre annually.

(ii) *Additional Selections for Purchase.* Any selector for purchase may make a further selection and purchase under the same terms and conditions, provided that the total area held by him does not exceed the maximum allowed for each class of land.

(iii) *Homestead Areas.* Any person who is not the holder on credit of any land may select and purchase at the price fixed one lot of first class agricultural land, not exceeding 50 acres nor less than 15 acres. The purchase money is payable by a deposit at the time of selection and the balance in 18 years in instalments, but no instalments are payable for the first, second, and third years. The purchaser must occupy the land within 4 years for a period of 5 years, and during that period effect improvements to the value of £1 per acre.

(iv) *Selections in Mining Areas.* Any person may select and purchase in a mining area one lot of first class land, not exceeding 100 acres, on the condition that 2s. 6d. be expended per acre per annum on improvements for 8 years. The price is fixed by the Surveyor-General. Land within 1 mile of a town may be selected and purchased only in lots of not less than 10 acres nor more than 20 acres. The residence condition is for 3 years, to be commenced within 2 years.

(v) *Sales by Auction.*—(a) *Town Lands.* Town lands may be sold by auction on credit, in which case one-third of the purchase-money is added thereto as interest. One-fourteenth of the purchase-money so increased must be paid at the time of sale, and the balance in 13 annual instalments. Improvements must be made within 5 years to the value of a sum equal to the purchase-money, otherwise such land and any improvements thereon are liable to be forfeited.

(b) *Rural Lands.* Rural lands may be sold by auction for cash or on credit. After survey and before sale such lands must be classified into first class, second class, and third class lands, with the following minimum upset prices—first class, £1 per acre; second class, 10s. per acre; and third class, 5s. per acre. Lots of less than 15 acres of first class land may be sold only for cash. When sold on credit, one-third of the purchase-money is added thereto as interest, and one-fortieth of the whole must be paid as deposit, and the balance in 14 annual instalments. Whether sold for cash or on credit, the same conditions of residence and improvements apply as in the case of land selected for purchase.

(c) *Lands within Mining Areas.* Crown land in mining areas, not selected under (iv) above, may be sold by auction for cash or on credit, having been previously surveyed into lots of (a) not more than 100 acres nor less than 10 acres of first class land; (b) not less than 30 acres of second class land; and (c) not less than 50 acres of third class land. No land within 1 mile of a town may be sold as second class land. The upset price may

not be less than £1 per acre for first class land, 10s. per acre for second class, and 5s. per acre for third class land. The usual conditions as to improvements apply, and first class land must be occupied for at least 3 years.

(vi) *After-auction Sales.* Town lands, not within 5 miles of a city, rural lands, and lands within a mining area, which have been offered for sale by auction and not sold, may be sold at the upset price by private contract under the same conditions as if sold by auction.

(vii) *Sales by Private Contract.* Where any second class Crown land, being less than 30 acres in area, and not contiguous to or adjacent to any other Crown land, is so situated as to make it desirable that the same should be sold, it may be sold either on credit privately on the same terms as second class lands or by public auction. In either case, the ordinary conditions as to the improvements on the land apply.

(viii) *Special Settlement Areas.* The Commissioner of Lands may withdraw from selection any area of rural land not less than 1,000 acres in extent which is first class land suitable for agriculture, horticulture, or dairy farming, together with adjacent inferior land, and may expend money in improving the same and subdividing it into blocks. Such blocks may be submitted to auction under the ordinary conditions applicable to first class land, or, without having been so submitted (a) may be declared to be open to any person; or (b) may be reserved for *bona fide* immigrants to the extent of one block in every six, for purchase by private contract at such price as the Commissioner may think fit, the purchase money being spread over 24 years. The usual conditions as to residence and improvements apply also to these blocks.

(ix) *Areas Conditionally Purchased.* The following table shows the areas alienated absolutely under systems of conditional purchases and sales on credit, and also the areas sold conditionally and the applications for conditional purchases received and confirmed, during the years 1919 to 1923 :—

TASMANIA.—CONDITIONAL PURCHASES, 1919 TO 1923.

Particulars.	1919.	1920.	1921.	1922.	1923.
	Acres.	Acres.	Acres.	Acres.	Acres.
<i>Completion of Conditional Purchases</i> ..	80,134	102,857	76,055	67,759	81,112
<i>Sold Conditionally—</i>					
Selections for Purchase ..	24,084	32,248	52,455	40,502	20,138
Homestead Areas ..	40	40	50	78	..
Auction Sales on Credit ..	769	2,028	1,400	361	362
Town and Suburban Allotments ..	412	733	1,614	550	193
Total	25,305	35,049	55,519	41,491	20,693
<i>Applications—</i>					
Received	1,212	1,836	966	895	769
Confirmed	437	524	498	513	425

§ 5. Leases and Licences under Land Acts.

1. *New South Wales.*—(i) *Conditional Leases.* Any applicant for or holder of a conditional purchase may apply for a conditional lease of Crown lands adjoining his property, provided that the area of the conditional lease does not exceed three times the area of the conditional purchase. The term of the lease is 40 years, but the holder of any such lease subsisting at the commencement of the Crown Lands and Closer Settlement (Amending) Act 1924, may, upon application as prescribed made during the last 5 years of the lease, have the term thereof extended for a period of 20 years, divided into two periods of 10 years each. The annual rent is determined by the local land board for three periods of 15, 15 and 10 years respectively, and where such lease is extended to 60 years for the two additional periods of 10 years. Pending determination, the provisional

rent is fixed at 2d. per acre. The conditions of residence and improvements are the same as those attached to a conditional purchase (see § 4 (i)) and a conditional lease may be converted into an additional conditional purchase.

(ii) *Conditional Purchase Leases.* A conditional purchase lease may be granted in a classified area set apart for such leases. The areas of the blocks, and the capital values, are determined by the Minister. The term of a lease is 50 years, divided into two periods of 25 years each. The annual rent is $2\frac{1}{2}$ per cent. of the capital value. Five years' residence is necessary, and special conditions must be complied with. A holder of an original conditional purchase lease may apply for an additional conditional purchase lease to be held under the same conditions, provided that no applicant may hold a greater area than would substantially exceed a home-maintenance area. At any time a conditional purchase lease may be converted into a conditional purchase or a homestead farm.

(iii) *Special Conditional Purchase Leases.* A special conditional purchase lease must not exceed an area of 320 acres. A deposit of rent at the rate of 6d. per acre must be made at the time of application, and, in addition to the conditions attached to a conditional purchase lease, the lessee must, within 3 years, effect improvements to the value of from 10s. to £1 per acre as the Minister may determine. The lease, moreover may be converted into a conditional purchase.

(iv) *Homestead Selections.* A classified area may be set apart for disposal by way of original homestead selection in blocks not exceeding 1,280 acres. The value and conditions as to drainage, clearing, etc., are as notified in the *Gazette*. Residence for 5 years is requisite, and a dwelling house valued at not less than £20 must be erected within 18 months. The rent for the first 5 years is $1\frac{1}{2}$ per cent. of the capital value, and thereafter $2\frac{1}{2}$ per cent. thereof. After 5 years, provided that all the conditions have been fulfilled, a homestead grant is issued, and then an annual rent equal to $2\frac{1}{2}$ per cent. of the capital value is payable in perpetuity, such capital value being re-determined every 25 years. The condition of residence may, if the local land board is satisfied, be performed by an approved deputy, but, under such circumstances, the rent is raised to $3\frac{1}{2}$ per cent. of the value, and the value of the dwelling house to £40, while, within 3 years, not less than one-tenth of the lease must be in full tillage, and, during the fourth and fifth years, one-fifth must be in full tillage. An additional homestead selection may be applied for by the holder of or the applicant for an original homestead selection under similar conditions to those applicable to an original selection. A homestead selection may be converted into a conditional purchase. Practically no lands are now set apart under this tenure.

(v) *Homestead Farms.* A classified area may be subdivided into farms of such areas as the Minister may determine. Such farms are leased in perpetuity at a rental of $2\frac{1}{2}$ per cent. of the capital value, which, after the expiration of 25 years, is re-appraised every 20 years. Residence is obligatory for 5 years, and the holder may, during the first 5 years, in lieu of paying rent, expend during each year a sum equal to not less than the amount of rent in effecting improvements. The holder of an original homestead farm may, in order to make up a home-maintenance area, apply also for an additional homestead farm under similar conditions. A homestead farm may be converted into a conditional purchase.

(vi) *Settlement Leases.* A classified area may be set apart for disposal by way of original settlement lease. Such lease, where the land appears suitable for agriculture, must not exceed 1,280 acres, or where suitable chiefly for grazing, 10,240 acres. A standard is adopted which permits the lessee to establish and maintain a home by the use of the land. The term of the lease is 40 years, divided into two periods of 15 years and one of 10 years. The annual rent for the first period is as gazetted, and for subsequent years is as determined by the local land board on application by the lessee. The lessee must reside on the land for 5 years, fence it within that period, and conform to any regulations regarding noxious animals and weeds. The holder may apply for a homestead grant of a portion of the lease and may also apply for an additional settlement lease, subject to the notified conditions, but the term of such additional lease expires upon the termination of the original lease. The holder may also convert his lease into a conditional purchase. Practically no lands are now set apart under this tenure.

(vii) *Special Leases.* Special leases may be granted for a period not exceeding 28 years for (a) wharves and jetties; (b) miscellaneous purposes, including grazing, agriculture and business purposes, up to 320 acres; or (c) tramway or irrigation purposes, not exceeding 3 chains in width without any limit in length. The rent is determined by the local land board. A special lease may be converted into certain specified tenures.

(viii) *Annual Leases for Pastoral Purposes.* Crown lands may be offered in areas not exceeding 1,920 acres on annual lease by auction or by tender, or may be applied for in the prescribed manner, the rent being fixed by the local land board. The holder of such lease may apply for a lease under improvement conditions, and may be granted a lease of an area sufficient for the maintenance of a home for a period not exceeding 10 years.

(ix) *Scrub Leases.* Crown lands wholly or partly covered by scrub or noxious undergrowth, may be leased for a term not exceeding 21 years, or up to 28 years, subject to such conditions as the local land board may make for the purpose of destroying the scrub. The term of the lease is divided into such periods as the Minister may determine, and the rent for the second and subsequent periods is fixed by the local Land Board. A home-maintenance area may be converted into a homestead selection.

(x) *Snow Leases.* Land usually covered by snow for a part of each year may be leased in areas not exceeding 10,240 acres for a period up to 14 years, but no person may hold more than one such lease.

(xi) *Inferior Lands Leases.* Leases of land of inferior character or in isolated positions may be granted subject to the terms notified in the *Gazette* either by tender or sold by auction, or, if no bid is received at auction, on application at the upset price. A home-maintenance area may be converted into a homestead grant during the last year of the lease.

(xii) *Crown Leases.* Crown leases may be disposed of for agriculture or grazing, or for both, in such blocks as the Minister may determine. The term is for 45 years, and the lessee must reside on his lease for 5 years. The annual rent is $1\frac{1}{2}$ per cent. of the capital value of the land, which is re-appraised every 15 years. During the last 5 years of the lease, the holder, unless debarred by notification, may convert an area thereof not exceeding that of a home-maintenance area into a homestead farm. Such lease, unless debarred by the notification setting the land apart, may be converted into a conditional purchase with or without a conditional lease.

(xiii) *Improvement Leases.* Land which is not suitable for settlement until improved may be leased subject to the following conditions:—(a) the term must not exceed 28 years; (b) the area must not exceed 20,480 acres; (c) the amount bid at auction, or offered by tender, or the upset rent, is to be the annual rent; (d) covenants must be specified for the improvement of the land; and (e) the holder may apply for a homestead grant of a portion of the leasehold, not exceeding a home-maintenance area, and has a tenant-right in the improvements which he has made.

(xiv) *Occupation Licences.* An occupation licence entitles the licensee to occupy Crown lands for grazing purposes, but the licence is only renewable from year to year, and the fees are liable to re-determination annually.

(xv) *Leases of Town Lands.* Crown lands within the boundaries of any town may be leased by auction or tender, such lease being in perpetuity and not subject to any term of residence. The area must not exceed $\frac{1}{2}$ acre. The value of the land is re-appraised every 20 years, and the rent is fixed at $2\frac{1}{2}$ per cent. of such value. No person may hold more than one lease. The land comprised in such lease may be purchased under certain conditions.

(xvi) *Suburban Holdings.* The Minister may set apart suburban Crown lands, or Crown lands within population boundaries, or within the Newcastle pasturage reserve, or any other Crown land, for disposal by way of suburban holdings. The area of each

holding is determined by the Minister, and the title is a lease in perpetuity. Residence for 5 years is necessary, but the local land board may exempt a holder from this condition for periods not exceeding 12 months. The rent is $2\frac{1}{2}$ per cent. of the capital value, which is re-appraised every 20 years. An additional suburban holding may be acquired by the holder of an original holding, but no person may hold more than one original holding, except as a mortgagee. A suburban holding may be purchased under certain conditions.

(xvii) *Week-end Leases.* A week-end lease must not exceed 60 acres, and is held in perpetuity. The rent is $2\frac{1}{2}$ per cent. of the capital value, which, after 25 years, is re-appraised every 20 years. No residence condition is attached, but improvements other than fencing must be effected to the value of £1 per acre within 5 years, and any special conditions carried out that may be notified. No person may hold more than one week-end lease except as mortgagee.

(xviii) *Residential Leases.* A holder of a miner's right may, for the purpose of *bona fide* residence, acquire a residential lease on a goldfield or mineral field, provided that:—(a) the area does not exceed 20 acres; (b) the term does not exceed 28 years; and (c) the conditions as prescribed are fulfilled. A resident holder of an area on a goldfield or mineral field may similarly hold a residential lease together with the area which he already holds, but the total area of the two together must not exceed 20 acres. A residential lease may be purchased under certain conditions.

(xix) *Leases in Irrigation Areas.* Lands in an irrigation area must be divided into (a) irrigable lands; (b) non-irrigable lands; and (c) town lands. The capital values are determined by the Water Conservation and Irrigation Commission. The following are the conditions under which leases are granted:—(a) *Irrigation Farms or Blocks.*—The title is a lease in perpetuity, and the annual rent is $2\frac{1}{2}$ per cent. of the capital value, which, after the expiration of 25 years, is re-appraised every 20 years. A condition of the lease is residence in perpetuity by the holder. (b) *Leases of Non-irrigable Lands.*—Leases of non-irrigable lands may be granted under the same conditions as those of irrigation farms or blocks. (c) *Town Lands Blocks.*—The title to a town lands block is also a lease in perpetuity, subject to the same terms and conditions as a lease of an irrigation farm except that (i) the annual rent must not be less than £1, (ii) the lease is subject to such building and other conditions as the Commission deems desirable. (iii) the condition of residence may be waived, and (iv) three adjoining blocks for the purpose of residence or four for business purposes may be held by one person.

(xx) *Western Lands Leases.* Under the Western Lands Act the Minister may declare Crown lands in the Western Division open for lease, and specify the area and rent. No rental may be less than 2s. 6d. per square mile nor more than 7d. per sheep on the carrying capacity, and may not be increased by more than 25 per cent. at each re-appraisal. The successful applicant is notified in the *Gazette* and must pay the first year's rent within one month after such notification. All leases issued under the Western Lands Act expire not later than the 30th June, 1943, except extended leases.

(xxi) *Forest Permits and Leases.* Under the Forestry Act, permits may be granted (a) to graze and water horses and cattle; (b) to occupy land as the site of a sawmill or other building, or any tramway, wharf, or timber depot; (c) to occupy land for charcoal burning or bee farming or other approved purpose; (d) to occupy land for growing fodder; and (e) to ringbark or otherwise kill or destroy trees. The fees are prescribed by regulation. Leases of land within State forests may also be granted for grazing or other approved purposes for any term not exceeding 20 years.

(xxii) *Areas Occupied under Leases and Licences.* On the 30th June, 1924, there were 63,077 leases and licences current under the Lands Department and the Western Land Board, comprising 114,916,852 acres of Crown lands.

The following table shows the areas which were granted under lease or licence during each year and those held under various descriptions of leases and licences at the end of the years 1919-20 to 1923-24.

**AREAS TAKEN UP UNDER LEASE OR LICENCE.—NEW SOUTH WALES,
1919-20 TO 1923-24.**

Particulars.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
<i>Areas taken up under Crown Lands Act.</i>	Acres.	Acres.	Acres.	Acres.	Acres.
Occupation Licences (auction) ..	60,330	36,000	..	10,150	34,526
Conditional leases (gazetted) ..	221,153	188,478	201,866	132,444	233,123
Conditional purchase leases ..	2,358	1,444	278	164	656
Settlement leases ..	3,460	10,430	1,292	19,753	9,900
Improvement leases ..	3,250	4,045	..	3,500	3,205
Annual leases ..	824,395	324,289	79,390	275,147	468,311
Scrub leases ..	13,890	22,420	..	4,718	9,812
Special leases ..	95,444	112,234	182,119	131,098	88,506
Residential leases ..	491	592	497	319	359
Permissive occupancies ..	409,365	103,740	36,642	436,425	439,682
Prickly-pear leases ..	600	1,140	48	..	..
Crown leases ..	593,554	671,247	700,419	550,254	406,721
Homestead farms ..	507,417	437,713	378,180	460,502	371,816
Homestead selections and grants ..	..	..	..	9,124	10,017
Suburban holdings ..	4,073	6,764	9,121	5,130	3,617
Week-end leases ..	76	159	48	219	108
Leases of town land ..	1	51	70	2	..
Returned soldiers' special holdings ..	9,865	4,872	6,213	110	22
Inferior land leases ..	..	..	..	1,280	..
Irrigation farms ..	..	..	..	..	1,838
<i>Areas taken up under Western Lands Act.</i>					
Leases ..	2,838,834	3,346,079	2,520,974	271,166	2,710,890
Permissive occupancies ..	38,501	636,451	169,460	382,445	38,660
Total	5,627,107	5,908,148	4,286,617	2,693,950	4,831,269

**AREAS OCCUPIED UNDER LEASE OR LICENCE.—NEW SOUTH WALES,
1919-20 TO 1923-24.**

Particulars.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
	Acres.	Acres.	Acres.	Acres.	Acres.
Outgoing pastoral leases ..	627,833	569,425	435,970	399,944	270,222
Occupation { (i) Ordinary ..	3,625,750	3,191,614	2,782,896	2,787,985	2,455,642
licences { (ii) Preferential ..	806,755	788,554	693,212	770,192	715,240
Homestead leases ..	35,687	35,687	15,207	15,207	..
Condit'l { (i) Gazetted ..	14,340,048	14,149,642	14,091,229	14,030,087	14,075,585
leases { (ii) Not gazetted (under provisional rent) ..	157,248	137,897	78,622	103,923	(c)
Conditional purchase leases ..	384,868	368,669	322,548	293,013	265,643
Settlement leases ..	4,248,828	3,973,171	4,032,936	3,953,363	3,836,205
Improvement leases ..	3,688,890	3,288,555	3,177,936	2,903,511	2,707,312
Annual leases ..	2,953,296	2,409,661	1,914,217	1,949,887	1,694,209
Scrub leases ..	1,537,704	1,502,434	1,247,926	1,165,782	1,099,355
Snow leases ..	134,424	129,020	126,020	126,020	126,020
Special leases ..	703,673	743,049	828,684	828,091	795,780
Inferior land leases ..	69,710	69,710	68,350	59,787	59,787
Blockholders' leases ..	1	1	..	..	..
Residential leases (on gold and mineral fields) ..	13,327	12,991	12,541	11,849	11,527
Church and school lands ..	11	11	11	11	11
Permissive occupancies(b) ..	1,774,935	1,878,675	1,915,317	2,063,273	2,182,302
Prickly-pear leases ..	37,692	35,932	30,502	24,829	21,028
Crown leases ..	3,092,904	3,664,798	4,128,533	4,519,500	4,704,214
Homestead farms ..	1,889,109	2,296,848	2,622,750	3,014,076	3,309,141
Homestead selections and grants ..	912,573	895,330	895,298	915,483	951,504
Suburban holdings ..	40,198	45,475	51,071	59,732	56,376
Week-end leases ..	281	418	487	714	791
Leases of town lands ..	19	71	139	134	129
Returned soldiers' special holdings ..	17,888	20,118	26,567	28,711	23,826
Irrigation farms and blocks ..	..	..	..	..	129,414
Western land leases and licences(a) ..	75,475,048	76,009,212	75,975,852	75,368,253	75,365,499
Total	116,568,698	116,166,968	115,474,827	115,393,357	114,916,852

(a) Includes permissive occupancies.

(b) Permissive occupancies in the Western Division not included.

(c) Not available.

2. *Victoria.*—(i) *Perpetual Leases.* A person may take up as a perpetual lease an area of Crown land varying from 600 acres of first class land to 2,880 acres of Class 4A land. The annual rental is fixed by the Board of Land and Works every 10 years. Specified improvements must be effected during the first 6 years, and residence on or within 5 miles of the land for 6 months during the first year and for 8 months during each of the 4 following years is necessary, but, if one-fourth of the allotment be cultivated during the first 2 years and one-half before the end of the fourth year, the residence covenant is not enforced.

(ii) *Auriferous Lands Licences.* Licences may be granted for any period not exceeding one year, entitling the holder to reside on or cultivate auriferous land not comprised within a city or town, and not exceeding in extent 20 acres. The terms and conditions are such as are approved by the Governor. No person may hold more than one licence. After the value of the land has been paid in rent, only a nominal rent is payable.

(iii) *Leases of Swamp or Reclaimed Lands.* Swamp or reclaimed lands may be leased in allotments not exceeding 160 acres, for a term of 21 years, subject to the lessee keeping open all drains, etc., thereon. The rent is fixed according to the value of the land as determined by the Board of Land and Works. The lessee must effect improvements to the value of 10s. per acre in each of the first 3 years, but residence on the land is not necessary.

(iv) *Perpetual Leases of Swamp or Reclaimed Lands.* The conditions under which these leases may be taken up are similar to those of ordinary leases, except that the lease is held in perpetuity, and the rent is fixed at 4 per cent. of the value of the land, which is re-appraised every 10 years.

(v) *Grazing Licences.* Grazing licences may be granted for a term not exceeding 7 years subject to cancellation at any time. In the case of returned soldiers, leases may be granted for 14 years. The rental varies according to the class of land.

(vi) *Perpetual Leases of Mallee Lands.* Perpetual leases of Mallee land may be granted for areas ranging from 640 acres of first class land to 4,000 acres of Class 4A land. The rent is $1\frac{1}{2}$ per cent. of the value of the land, which is re-appraised every 10 years. Residence is necessary during 6 months of the first year and during 8 months in each of the following 4 years, but the residence condition is waived if one-fourth of the land is cultivated within 4 years and one-half by the end of the sixth year, or, alternatively, if improvements, ranging in value from 10s. to 2s. 6d. per acre, according to the class of land, are effected during the first 6 years.

(vii) *Miscellaneous Leases and Licences.* Leases up to 21 years at an annual rental of not less than £5, and annual licences at various rates are issued for different purposes, such as sites for residences, gardens, inns, stores, smithies, butter factories, creameries, brickworks, etc. Licensees who have been in the possession of land for 5 years (if such land is situated outside the boundaries of a city) may purchase the same at a price to be determined by the Board.

(viii) *Bee Farm Licences.* Annual licences for bee farms may be issued for areas of not more than 10 acres at such fees as the Minister may fix.

(ix) *Bee-Range Area Licences.* A bee-range licence may be secured on payment of $\frac{3}{4}$ d. for every acre of Crown land within a radius of 1 mile of the apiary, and in connexion therewith all suitable timber may be protected from destruction although held under grazing lease or licence.

(x) *Eucalyptus Oil Licences.* A licence may be granted of land suitable for the growth of trees in connexion with the manufacture or production of eucalyptus oil. The licence is in force for such period and subject to such conditions as may be prescribed.

(xi) *Forest Leases.* Under the Forests Act, a person may obtain, for a term not exceeding 12 years, a lease of Crown land within any reserved forest for (a) the grazing of cattle; (b) sawmilling purposes, but not exceeding 3,000 acres in extent; or (c) any miscellaneous purpose for which a miscellaneous lease may be granted under the Land Act. The rent and conditions are as prescribed.

(xii) *Forest Licences.* Under the same Act, and subject to prescribed conditions, the Forests Commission may grant to any person for any term not exceeding one year

a licence to occupy (a) any area for the grazing of cattle; (b) a special area, not exceeding 640 acres, for the cutting of timber; (c) an area, not exceeding one acre, for residence purposes; or (d) an area for any of the miscellaneous purposes for which a miscellaneous licence may be granted under the Land Act.

(xiii) *Forest Townships.* A sufficient part of any reserved forest may be set apart as a forest township site, and divided into allotments. Such allotments may, upon the prescribed terms and rental, be leased for any term not exceeding 20 years to any person engaged in the forest industry or to any business person, and these leases are renewable.

(xiv) *Areas held under Leases and Licences.* The following statement shows the areas of Crown lands occupied under leases and licences from 1919 to 1923. All grazing area leases expired on the 29th December, 1920:—

CROWN LANDS UNDER LEASE OR LICENCE.—VICTORIA, 1919 TO 1923.

Tenure.	1919.	1920.	1921.	1922.	1923.
	Acres.	Acres.	Acres.	Acres.	Acres.
Grazing area leases	2,408,481	2,320,343			
Grazing licences (exclusive of Mallee) ..	5,974,069	6,242,276	6,649,821	6,647,808	6,647,800
Mallee lands	4,931,503	4,908,543	1,680,670	2,405,320	2,405,328
Auriferous lands (licences)	68,452	65,590	64,135	61,577	56,789
Swamp lands (leases)	1,759	1,478	1,565	1,697	2,854
Perpetual leases	7,559	7,559	7,559	7,559	5,240
Perpetual leases under Mallee Lands Acts 1896-1901	139,653	141,957	128,684	113,632	102,518
Total	13,531,476	13,696,746	8,532,434	9,237,593	9,220,520

3. *Queensland.*—(i) *Perpetual Lease Selections.* The area of a perpetual lease selection must not exceed 2,560 acres, and is held under a lease in perpetuity. An applicant for such lease, who undertakes to reside on his selection during the first 5 years of his lease, has priority over other applicants, and further priority is granted to an applicant who, in addition, agrees to cultivate at least one-twelfth of his selection within the first 3 years. The annual rent during the first 15 years is $1\frac{1}{2}$ per cent. of the notified capital value, provided that the rent for the second year is a peppercorn (if demanded). The annual rent for each period of 15 years thereafter is determined by the Land Court at a similar percentage of the unimproved capital value of the land as fixed by that Court. Where the land is in a prickly-pear area or a buffer area under the Prickly-pear Act, the maximum area allowed to one person may exceed 2,560 acres. The duration of each period of a selection under such an area is 30 years, and the Prickly-pear Land Commission, instead of the Land Court, fixes the rent.

(ii) *Perpetual Lease Prickly-pear Selections.* The maximum area for a perpetual lease prickly-pear selection is 2,560 acres, and the same conditions as to priority apply as in the case of an ordinary perpetual lease selection. The lease is in perpetuity and contains a condition for the destruction of the prickly pear thereon. The rent for the first 30 years is a peppercorn (if demanded), and for each period of 30 years thereafter is $1\frac{1}{2}$ per cent. of the unimproved capital value as determined by the Prickly-pear Land Commission.

(iii) *Pastoral Leases.* The Minister may, by notification in the Gazette, declare any Crown land open for pastoral lease, subject to conditions as to fencing, improvements, and the destruction of noxious weeds. The notification must specify the areas to be leased, the maximum area which one person may hold, the term of the lease, which must not exceed 30 years, and the rent per square mile for the first period of 10 years. The rent for the second and third periods of 10 years is fixed by the Land Court. In a prickly-pear area or buffer area the periods are 20 years, and the Prickly-pear Land Commission fixes the rent.

(iv) *Preferential Pastoral Leases.* When the terms of the opening notification so indicate, land may be applied for during the first 6 months only as preferential pastoral leases, and, in that case, no person who is under 16 years of age or is the selector or lessee

of a grazing selection or the owner of freehold land of an area of 5,000 acres and upwards shall be competent to apply for or hold the land as a preferential pastoral lease. The holder of an ordinary pastoral lease will also be debarred from applying for or holding the specified land under preferential pastoral lease if the area of the latter combined with that of the pastoral holding exceeds the maximum area mentioned in the notification. When an applicant for a preferential pastoral lease on making his application offers that the holding shall be subject to the condition of personal residence during the first 7 years, and undertakes to perform that condition, he receives priority over applicants who do not make such offer. In other respects the conditions as regards improvements and the destruction of noxious weeds are the same as in the case of an ordinary pastoral lease. The holder of a preferential pastoral lease must hold and use the land for his own exclusive benefit. There is no such condition in connexion with an ordinary pastoral lease.

(v) *Prickly-pear Leases.* The Minister, on the recommendation of the Prickly-pear Land Commission, may, by notification in the *Gazette*, declare any Crown land (being prickly-pear land) open for prickly-pear lease subject to any of the conditions applicable to pastoral holdings situated outside a prickly-pear area or buffer area. The land comprised in a prickly-pear lease or any part thereof may be resumed for agricultural or mixed farming settlement without compensation except for improvements. The rent for the second and each succeeding period of 10 years is determined by the Prickly-pear Land Commission.

(vi) *Occupation Licences.* Annual licences are granted to occupy Crown lands, either after notification in the *Gazette* or by the Minister without competition. In the former case the rent is as notified, and in the latter is as fixed by the Minister. Licences expire on the 31st December in each year, but may be renewed from year to year upon payment of the rent on or before the 30th September, and the rent may be increased on or before that date. A licence is determinable on 3 months' notice.

(vii) *Special Leases.* The Governor may issue a lease of any portion of land for any manufactory, or for any industrial, residential or business purposes, or for any race-course or recreation purposes, for a period not exceeding 30 years upon such conditions as he thinks fit. A lease may also be issued of reserved lands which are infested with noxious weeds or scrub, conditionally on the lessee destroying such noxious plants.

(viii) *Grazing Selections.* Crown land may be leased as grazing selections, but no person may hold a grazing selection or selections exceeding 60,000 acres in the aggregate. A grazing selection must be fenced within 3 years with a stock-proof fence, a rabbit-proof fence, a marsupial-proof fence or with a fence which is both rabbit-proof and marsupial-proof as the terms of the notification opening the land for selection require, and when so fenced the selector is entitled to a lease. A condition may be imposed for the destruction of noxious weeds. The annual rent for the first 7 years is as notified or tendered, and for each succeeding period of 7 years is as determined by the Land Court, except in the case of selections in a prickly-pear area or a buffer area. In such cases the Prickly-pear Land Commission determines the rent for the period of 14 years instead of 7 years. Grazing selections may be either (a) grazing farms, or (b) grazing homesteads; and when land is declared open for grazing selection it must be available for grazing homesteads only during the first 56 days. If at the expiration of that period the land has not been applied for it shall for a further period of 34 days be deemed to be withdrawn from selection, after which it will be available for selection as a grazing farm only. The lease of a grazing farm is subject to the condition of occupation during the whole term, and that of a grazing homestead to the condition of personal residence during the whole term.

(ix) *Auction Perpetual Leases.* Perpetual leases of (a) town lands, in areas not exceeding half-an-acre; (b) suburban lands, in areas not exceeding 5 acres; and (c) country lands, in areas not exceeding 640 acres, may be sold by auction to any person, to trustees for religious or charitable bodies, or to companies. Improvements to the value of at least £25 must be effected within 2 years, and the rent during the first 15 years is fixed at 3 per cent. of the upset price, or of such greater capital sum as has been bid by the purchaser. For each period of 15 years thereafter, the rent is 3 per cent. of such unimproved value of the land as is determined by the Land Court. No person may hold more than 6 town or 6 suburban leases in any one town or adjacent thereto.

(x) *Areas taken up under Lease or Licence.* The following table gives particulars of the areas taken up under lease or licence during the years 1919 to 1923 :—

AREAS TAKEN UP UNDER LEASE OR LICENCE.—QUEENSLAND, 1919 TO 1923.

Tenure.	1919.	1920.	1921.	1922.	1923.
	Acres.	Acres.	Acres.	Acres.	Acres.
Pastoral leases	4,360,320	4,017,080	1,121,800	2,998,480	3,326,320
Occupation licences	5,321,400	4,274,440	5,994,440	7,993,560	7,757,440
Grazing farms	4,437,564	2,009,034	949,432	1,306,603	1,938,428
Grazing homesteads	2,094,413	2,807,409	1,853,990	1,673,724	2,853,341
Perpetual lease selections	609,483	490,546	419,886	250,518	205,282
Perpetual lease prickly-pear selections	514,064	435,299	270,985	154,359	140,093
Auction perpetual leases, Town ..	231	142	150	206	175
" " " Suburban ..	199	262	236	371	187
" " " Country ..	607	889	916	924	1,067
Special leases	7,478	6,511	11,806	18,012	25,905
Leases of reserves	15,249	39,173	28,190	18,050	46,741
Total	17,361,008	14,080,785	10,651,831	14,414,807	16,294,979

The following particulars are available respecting leases taken up in 1924 :—

Grazing farms	744,565 acres.
Grazing homesteads	3,083,548 acres.
Perpetual lease selections	278,137 acres.
Perpetual lease prickly-pear selections ..	85,296 acres.

The gross area held at the end of the year 1923 for purely pastoral purposes was 349,817 square miles.

Six non-competitive perpetual leases were issued during 1924, the total area being 121 acres.

The total areas occupied under lease or licence will be found in a table at the end of this chapter (see § 11.4).

4. South Australia.—(i) *Perpetual Leases.* Crown lands (except town lands) which have been surveyed or of which the boundaries have been delineated in the public maps may be offered on perpetual lease. Details concerning the area which is to be cleared and rendered available for cultivation, and the rent to be paid, are notified in the *Gazette*. An applicant must deposit with his application 20 per cent. of the first year's rent (if any). Preference is given in allotting land to the applicant who agrees to reside on the lease for 9 months in each year. If no application is made within 3 months from the date of notification, the Commissioner may offer the land at a reduced rent. No lease may be granted to any person of lands the unimproved value of which exceeds £5,000, except where the land is suitable for pastoral purposes only, while no lease is granted if the carrying capacity of all the lands held by the lessee would exceed 5,000 sheep, or, if outside Goyder's line of rainfall, 10,000 sheep. The lessee must fence the land within 5 years, and clear and render available for cultivation not less than one-eighth during the first 2 years, one-eighth during the second 2 years, and then one-eighth annually until three-quarters have been so cleared and rendered available for cultivation.

(ii) *Special Perpetual Leases.* Where the Commissioner directs, the following provisions apply respecting the payment of rent :—(a) No rent is payable for the first 4 years; (b) from the end of the fourth to the end of the tenth year, rent is payable at the rate of 2 per cent. of the value of the land; and (c) thereafter, 4 per cent. of the value of the land is payable in perpetuity.

(iii) *Homestead Blocks.* The conditions applying to these blocks are the same as those for blocks held under agreement to purchase, except that they are leased in perpetuity and cannot be sold. (See § 4.)

(iv) *Miscellaneous Leases.* Leases may be granted for various purposes for any term not exceeding 21 years at such rents and upon such conditions as the Commissioner may determine.

(v) *Licences.* Licences may be granted of Crown lands for (a) fishermen's residences and drying grounds, (b) manufactories, fellmongering establishments, slaughter houses, brick or lime kilns or sawmills, (c) depasturing sheep, cattle or other animals, or (d) any other approved purpose. These licences are in force for one year only and are subject to such fees and conditions as the Commissioner may impose.

(vi) *Leases of Resumed Lands.* The Commissioner may resume possession of any well or other place where water has been found, and of not more than 1 square mile of land contiguous thereto, or, in the case of artesian water, 5 square miles. A lease of such land may be offered by private contract or by auction, the original lessee of the land having a preferential right to such lease. The lessee must maintain an accommodation house, if required, and construct facilities for watering stock.

(vii) *Pastoral Leases.* These leases are issued under the Pastoral Acts, and are granted for a term of 21 or 42 years. The rent is fixed by the Commissioner of Crown Lands, and is based on the unimproved value, which is re-appraised in the case of 42 years' leases after the expiration of 21 years. The lessee must expend in improvements such sum not exceeding 10s. per square mile per annum as is recommended by the Pastoral Board, but this covenant ceases when £3 per square mile has been expended. Conditions as to stocking must also be fulfilled.

(viii) *Leases to Discoverers of Pastoral Country, etc.* Under the same Acts, a person who has discovered pastoral lands or has applied for a lease which has been abandoned for 3 years or more on account of vermin may obtain a lease for 42 years at a peppercorn rental for the first 10 years, at 6d. per square mile for the next 10 years, and thereafter at a rent of 2s. per square mile annually.

(ix) *Special Leases to Discoverers of Water.* The Governor may, under the Pastoral Acts, issue a permit to any person desirous of searching for water. The permit is in force for one year and confers on the holder the exclusive right to search for water on the land specified therein, and a preferential right to a lease. The holder of a permit who has discovered a permanent supply of water equal to not less than 4,000 gallons per day suitable for great cattle may be granted a lease not exceeding 100 square miles at a similar rental to that paid by lessees who have discovered pastoral country (see preceding subsection (viii)). The conditions of stocking are modified, and for 10 years the land is exempt from rating under the Wild Dogs Act. The discoverer of such water supply is also entitled to a reward of at least £200, provided the supply is not less than 3 miles from any existing well or bore.

(x) *Irrigation Blocks.* Under the Irrigation Act, blocks of land are offered in irrigation areas on perpetual lease at rentals fixed by the Irrigation Commission. Provided that the block has not been cultivated, one-quarter only of the rent is payable for the first year, one-half for the second year, three-quarters for the third year, and thereafter the full amount annually. Not more than 50 acres of irrigable or reclaimed land may be held by one person. Residence for 9 months in each year is necessary, and certain specified improvements must be effected.

(xi) *Town Allotments in Irrigation Areas.* Perpetual leases of town allotments in irrigation areas must be offered for sale by auction, and, if not so sold, may be sold by private contract at not less than the upset price. A lessee must within 18 months effect improvements to the value of not less than 10 times the annual rent, but not less than £150 if the allotment is used for residential purposes, or £200 if used otherwise. Annual licences may also be granted to occupy town allotments.

(xii) *Forest Leases.* Leases of land comprised in any forest reserve under the Woods and Forests Act, for cultivation or grazing or both, may be offered for sale at public auction for any term not exceeding 42 years. With the approval of the Commissioner of Forest Lands such land may also be leased by the Land Board. With the exception of leases in certain scheduled forest reserves, a lessee may surrender his lease and be granted a perpetual lease or agreement to purchase in lieu thereof.

(xiii) *Areas Leased.* The following table gives the areas leased during each of the years 1919-20 to 1923-24 under the different forms of lease tenure:—

AREAS LEASED.—SOUTH AUSTRALIA, 1919-20 TO 1923-24.

Particulars.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
	Acres.	Acres.	Acres.	Acres.	Acres.
Perpetual leases—					
Homestead farms (repurchased)	.. 617	15 804	.. 911	1 490	.. 2,893
Irrigation and reclaimed lands ..	205,730	147,361	159,007	284,074	123,039
Other Crown lands ..					
Miscellaneous leases—					
Grazing ..	169,855	98,060	1,294	136,159	21,626
Grazing and cultivation ..	44,141	15,102	11,687	64,371	4,082
Agricultural College land ..					
Forest ..	9,046	3,210	2,005	21,840	..
Pastoral leases ..	5,442,560	2,918,400	1,437,440	2,259,200	2,727,680
Total	5,871,949	3,182,952	1,612,344	2,766,135	2,879,320

The total areas held under lease are given in the table at the end of this chapter.

5. *Western Australia.*—(i) *Pastoral Leases.* Crown lands may be leased for pastoral purposes, the maximum areas of the blocks and the rentals varying according to the Division in which they are situated, but no person may acquire more than 1,000,000 acres. Pastoral leases must be stocked within 2 years at the rate of 10 head of sheep or 2 head of large stock for each 1,000 acres, within 5 years with double that quantity, and for the remainder of the term with 3 times that number. Pastoral leases may be leased for a term expiring on the 31st December, 1948, and the rentals are re-assessed at the end of 15 years, but may not be increased by more than 50 per cent. Lessees must improve their land to the extent of £5 per 1,000 acres within 5 years, and to the extent of £10 per 1,000 acres within 10 years.

(ii) *Special Leases.* The Governor may grant special leases of Crown lands, not exceeding 25 acres in area, for a term not exceeding 21 years, at a yearly rental of not less than £2. Such leases are granted for miscellaneous purposes, such as obtaining guano, sites for inns or factories, market gardens, and similar objects.

(iii) *Residential Leases.* Any unalienated town, suburban or rural lands, may be set apart for residential leases and subdivided into lots not exceeding $\frac{1}{2}$ acre each. The terms and conditions are prescribed by regulation. Any holder of a residential lease, who has resided thereon for 2 years, may convert the same into a working-man's block.

(iv) *Leases of Town and Suburban Land.* The Governor may lease any town or suburban lands for a period of 99 years at an annual rental equal to 4 per cent. of capital value, which is to be re-appraised every 10 years.

(v) *Irrigation Leases.* Under the Rights in Water and Irrigation Act, any land may be acquired for or dedicated to the purpose of that Act, and the Minister may grant leases in perpetuity of any such land at an annual rent based on the unimproved capital value of the demised land (subject to re-appraisal at prescribed periods) and the value of the improvements thereon, subject to such conditions as are prescribed.

(vi) *Forest Permits.* Under the Forests Act, the Conservator of Forests may issue permits entitling the holders (a) to occupy land as the site of a sawmill, as a timber depot, for growing fodder, or for any other approved purpose; or (b) to work a sawmill; or (c) to make roads or tramways; or (d) to graze and water cattle, on lands under his jurisdiction. The term of a permit must not exceed 10 years, and permits must be submitted to public auction. The Conservator of Forests may also grant forest leases on such conditions as he may think fit, for periods not exceeding 20 years, for grazing, agriculture, or other purposes not opposed to the interests of forestry.

(vii) *Areas Leased.* The subjoined table gives the number of leases and the areas of land leased by the Lands Department during the years ending 30th June, 1920 to 1924 :—

LEASES.—WESTERN AUSTRALIA, 1919-20 TO 1923-24.

Particulars.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
Number of leases issued ..	545	694	821	504	605

AREAS OF LEASES ISSUED.

	Acres.	Acres.	Acres.	Acres.	Acres.
Pastoral leases	18,961,478	20,303,900	28,259,124	5,738,313	20,361,793
Special leases	1,509	7,762	8,874	3,838	2,265
Leases in reserves	215,134	38,573	374,338	36,396	25,370
	19,178,121	20,350,235	28,642,336	5,778,547	20,389,428

The total areas leased are given in the table at the end of this chapter.

6. *Tasmania.*—(i) *Grazing Leases.* Leases of grazing lands are put up to auction, the upset price being fixed by the Commissioner, but at not less than an annual rent of 5s. per 100 acres. Lands not disposed of by auction may be gazetted and let by private contract.

(ii) *Leases of Land Covered with Button-grass, etc.* The Commissioner may lease to any person, for a period not exceeding 26 years, any Crown land covered with button-grass, river-grass or rushes, at a rental which must not be less than 25s. per 1,000 acres, provided that the lessee covenants to improve the area to the value of £2 10s. per 1,000 acres per annum.

(iii) *Leases of Mountainous Land.* Leases for a period not exceeding 21 years may be granted of land situated at an altitude of not less than 1,800 feet. The rent is not less than £2 10s. per 1,000 acres per annum, and the lessee must improve the land to the value of £5 per 1,000 acres annually.

(iv) *Miscellaneous Leases.* The Commissioner may lease for a period not exceeding 14 years land for wharves, jetties, watercourses, manufactories, railways, tramways, etc. The lessee must carry out the conditions stated in the lease and pay the prescribed rent half-yearly.

(v) *Temporary Licences.* The Commissioner may grant to any person a temporary licence to hold, for not exceeding 12 months, any Crown lands for such purposes and on such terms and conditions as may be prescribed.

(vi) *Occupation Licences.* An occupation licence for a year expiring on the 31st December may be issued at a fee of 5s. to any person, such licence entitling him to occupy the surface of any Crown land within a mining area not exceeding $\frac{1}{4}$ acre in extent.

(vii) *Pastoral Leases.* A holder of an occupation licence or any approved person may lease within a mining area by private contract a pastoral lease for a period not exceeding 14 years, upon such terms and conditions as the Governor may see fit. No such lease may exceed 1,000 acres in area.

(viii) *Residence Licences.* A residence licence, for which a fee of 10s. is charged, and which is in force until the 31st December, entitles the holder to occupy for residence an area not exceeding $\frac{1}{4}$ acre in any town situated within a mining area which has been surveyed and gazetted as available therefor.

(ix) *Business Licences.* A business licence, costing £1 for a year expiring on the 31st December, authorizes the holder to occupy for business purposes the surface of any Crown land within a mining area, not exceeding $\frac{1}{4}$ acre in area.

(x) *Forest Leases, Licences and Permits.* Under the Forestry Act, the following leases, permits, and licences may be granted on lands contained in State forests and timber reserves :—(a) *Forest Permits.* A forest permit confers upon the holder, for not exceeding 15 years, exclusive rights over the land therein defined for all purposes connected with the obtaining, conversion and removal of timber and forest produce. Such permit may be submitted to public auction or tender, and is subject to the payment of royalties on all produce taken, and to the prescribed conditions; (b) *Occupation Permits.* An occupation permit may be granted for a period not exceeding 15 years for sawmill sites, timber depots, roads and tramways. A similar permit may also be issued entitling the holder to graze and water cattle; (c) *Forest Licences.* A forest licence authorizes the holder to take forest produce, subject to the payment of fees and royalties as prescribed. The term of such licence may not exceed 3 months; (d) *Forest Leases.* Land may be leased on such conditions as the Minister may think fit for not longer than 14 years for grazing, agricultural, or other purposes. No compensation is payable for improvements, but the licensee may remove any buildings or fences, or dispose of them to an incoming tenant; (e) *Plantation Leases.* The Minister may grant, for not exceeding 60 years, leases for plantation purposes at such rent and upon such conditions as may be prescribed.

(xi) *Areas Leased.* The following table gives the areas leased during each year and the total areas leased at the end of the years 1919 to 1923 :—

AREAS LEASED.—TASMANIA, 1919 TO 1923.

Particulars.	1919.	1920.	1921.	1922.	1923.
AREAS LEASED DURING YEAR.					
Pastoral leases	Acres. 149,246	Acres. 340,876	Acres. 197,597	Acres. 89,666	Acres. 171,484
TOTAL AREAS LEASED AT END OF YEAR.					
Ordinary leased land	1,341,000	1,540,000	1,608,000	1,577,653	1,593,000
Islands	151,000	107,000	108,000	107,000	107,000
Land leased for timber	218,784	230,524	236,847	308,072	272,270
Total	1,710,784	1,877,524	1,952,847	1,992,725	1,972,270

7. Northern Territory.—(i) *Pastoral Leases.* A pastoral lease may be granted for such term, not exceeding 42 years, as the Land Board determines. The rental for the first period is fixed by the Board, and is subject to re-appraisalment on such dates as are specified in the lease or as are prescribed.

(ii) *Agricultural Leases.* Agricultural lands are classified, and the maximum area which may be included in any one lease is as follows :—Division A, Cultivation Farms, Class 1, 1,280 acres, Class 2, 2,560 acres : Division B, Mixed Farming and Grazing, Class 1, 12,800 acres, Class 2, 38,400 acres. Agricultural leases are granted in perpetuity, and the rent for the first period is fixed by the Land Board, and is re-appraised every 21 years. The lessee must—(a) in the case of lands for mixed farming and grazing, stock the land to the extent prescribed by the regulations and keep it so stocked; (b) establish a home within 2 years and reside on the leased land for 6 months in each year in the case of land for cultivation, and for 4 months in each year in the case of land for mixed farming and grazing; (c) cultivate the land to the extent notified by the Board; and (d) fence the land as prescribed.

(iii) *Leases of Town Lands.* Leases of town lands are granted in perpetuity, the rental being fixed every 14 years. Such leases must, in the first instance, be offered for sale by public auction, and if not so sold, may be allotted by the Board to any applicant, at the rental fixed by the Board. The lessee must erect, within such time as is notified, buildings to the value specified in the conditions of sale.

(iv) *Miscellaneous Leases.* The Land Board may grant a lease of any portion of Crown lands, or of any dedicated or reserved lands, for any other prescribed or approved purpose. Such leases are for a term not exceeding 21 years, and may be offered for sale by public auction, or granted to any applicant at an annual rental fixed by the Board.

(v) *Grazing Licences.* Licences may be granted to any person to graze stock on any particular Crown lands for such period, not exceeding one year, as is prescribed, and at the rent and on the conditions prescribed.

(vi) *Occupation Licences.* Licences may be granted for any period not exceeding 5 years, and on prescribed rentals and conditions, for the purpose of drying or curing fish, or for any manufacturing or industrial purpose, or for any prescribed purpose.

(vii) *Miscellaneous Licences.* The Board may grant licences for miscellaneous purposes for a period not exceeding 12 months on prescribed terms and conditions.

(viii) *Leases to Aborigines.* The Governor-General may grant to any aboriginal native, or to the descendant of any aboriginal native, a lease of Crown lands not exceeding 160 acres for any term of years upon such terms and conditions as he thinks fit.

(ix) *Areas held under Leases, Licences, and Permits.* The following table shows the total areas held under lease, licence, and permit at the end of the years 1920 to 1924 :—

NORTHERN TERRITORY.—AREAS HELD UNDER LEASES, LICENCES, OR PERMITS, 1920 TO 1924.

Particulars.	1920.	1921.	1922.	1923.	1924.
	Acres.	Acres.	Acres.	Acres.	Acres.
Right of purchase leases ..	356	356	356	356	356
Pastoral leases and grazing licences ..	133,444,160	136,464,960	130,410,720	134,214,800	137,209,866
Other leases and licences ..	9,829,555	1,211,337	5,167,720	2,112,816	1,945,088
Total	143,274,071	137,676,653	135,578,796	136,327,972	139,154,954

On the 31st December, 1924, the areas held under leases and licences were :—Pastoral leases, 114,334,986 acres ; annual pastoral leases, 33,280 acres ; pastoral permits, 2,211,840 acres ; grazing licences, 20,629,760 acres ; miscellaneous leases (including water leases), 1,942,803 acres ; mining leases, 1,956 acres ; tin dredging leases, 329 acres. There were also 32,724 square miles under reserve for aboriginal natives of Australia, 38,721 square miles mostly over pastoral holdings under licences to prospect for mineral oil and coal, and 923,520 acres mission station leases.

8. *Federal Capital Territory.*—(i) *General.* Under the Seat of Government (Administration) Act 1910, no Crown lands in the Territory may be sold or disposed of for any estate in freehold except in pursuance of some contract entered into before the commencement of that Act. Leases of land in the City Area are granted under the City Area Leases Ordinance 1924, and leases of other lands under the Leases Ordinance 1918-23.

(ii) *City Leases.* The Minister may grant leases in the City area of any Crown land for business or residential purposes. Such leases may be issued for a period not exceeding 99 years at a rental equal to not less than 5 per cent. of the unimproved value of the land, which value is subject to re-appraisal at the expiration of 20 years, and thereafter every 10 years. A suitable building must be commenced within 2 years and completed within 3 years unless an extension of time as may be approved is allowed.

The first public auction sale of City Leases in Canberra was held on 12th December, 1924, at which 400 blocks were offered and 200 blocks were sold, including business and residential subdivisions. Many of the blocks not taken up at the sale have since been leased.

(iii) *Leases of other Lands.* Leases may be granted for grazing, fruitgrowing, horticultural, agricultural, residential, business, or other purposes for a period not exceeding 25 years, provided that a lease for any period exceeding 5 years must be approved by the Governor-General. The annual rental is 5 per cent. of the assessed value of the land, including improvements which are the property of the Crown, plus the amount of rates payable. No person may hold under lease land of a greater value than £6,000, exclusive of the value of buildings and fences thereon.

(iv) *Areas of Acquired, Leased, etc., Lands.* The following table shows the areas of lands acquired, alienated, in process of alienation, held under lease and unoccupied at the end of the year 1924 (exclusive of land (17,920 acres) at Jervis Bay) :—

TENURES OF LAND.—FEDERAL CAPITAL TERRITORY, 1924.

	Acres.
Area of acquired lands	206,296
Lands alienated	43,686
In process of alienation (conditional purchases and conditional leases)	74,070
Held under lease	119,552
Unoccupied lands (roads, reserves, etc.)	140,056
Total Area of Territory	583,660

§ 6. Closer Settlement.

1. *New South Wales.*—(i) *Acquisition of Land.* For the purposes of the Closer Settlement Act, the Governor may constitute three Closer Settlement Advisory Boards, but at present one such Board deals with closer settlement for the whole State. Where the Board reports that any land is suitable for closer settlement, the Governor may either (a) purchase it by agreement with the owner, or, failing such agreement, (b) where the value of the unimproved land exceeds £20,000, resume it compulsorily; but every such purchase or resumption must be approved by Parliament. Land within 15 miles of a railway, the construction of which is authorized, if the property of one owner, and exceeding £10,000 in value, may also be purchased or resumed.

Under the provisions of the Crown Lands Consolidation Act 1913, the Governor may acquire either by way of purchase or resumption, after report by the Local Land Board, any land of any tenure for certain purposes including settlement. Private lands may also be acquired for Closer Settlement by direct purchase under Executive Council authority.

(ii) *Disposal of Acquired Lands.*—(a) *Closer Settlement Purchase and Soldiers' Group Purchase.*—Lands acquired or resumed for closer settlement are mainly disposed of as Settlement Purchase under the Closer Settlement Acts or Soldiers' Group Purchase under the Returned Soldiers' Settlement Act 1916. The capital value is as notified and represents roughly the cost of acquisition plus the cost of subdivision, etc. Unless otherwise specified the deposit and annual instalment are $6\frac{1}{2}$ per cent. of the capital value, including interest at the rate of $5\frac{1}{2}$ per cent. per annum. Returned soldiers taking up a settlement purchase or group purchase are not required to lodge any deposit. Residence for 5 years is obligatory, and in the case of a settlement purchase permanent improvements to the extent of 10 per cent. of the value of the land must be effected within 2 years, and an additional 15 per cent. within 5 years. Improvements existing on the land when allotted are, however, taken into consideration in satisfaction of the improvement conditions. By regular annual payments the purchase-money can be repaid in about 32 years. The settler may, however, repay the whole of the balance of the purchase-money at any time.

(b) *Sales by Auction.* Land acquired for closer settlement may also be set apart as township allotments. Such allotments, which must not exceed $\frac{1}{2}$ -acre in area, may be sold by auction, but no person may hold more than three such allotments, except by way of mortgage.

(c) *After-auction Sales.* When any land has been offered for sale or lease by auction, and is not so sold or leased, any person may apply for the same at the upset price. A deposit of 25 per cent. of the upset price must be lodged with the application, and the balance paid according to the conditions notified in the Gazette. Such land may also be set apart for disposal under the Crown Lands Act.

(d) *Permissive Occupancies.* The Minister may grant permits to occupy any acquired land which remains undisposed of, upon such terms and conditions as he thinks fit.

(iii) *Closer Settlement Promotion.* Any three or more persons, or one or more discharged soldiers, each of whom is qualified to hold a closer settlement purchase, may negotiate with an owner of private lands to purchase a specified area on a freehold basis. If the Minister approves, the land is bought by the Crown and paid for in cash or debentures, but the freehold value including improvements must not exceed £3,000 for any one person, or in exceptional cases £3,500. If the land is suitable for grazing only, the value may be up to £4,000. If the land is purchased for cash, the applicant for a closer settlement purchase pays therefor at the ordinary rate, but if payment for the land is made in debentures, the deposit and annual instalments are $1\frac{1}{2}$ per cent. in advance of the rate of interest paid by the Crown, and the interest on the unpaid balance of the purchase money is $\frac{1}{2}$ per cent. in advance of the rate of interest paid by the Crown as aforesaid. Any one or more discharged soldiers or sailors may also enter into agreements to purchase on present title basis a conditional purchase, a conditional purchase lease, a conditional purchase and conditional lease, a homestead selection, a homestead farm, a settlement lease, a Crown lease, an improvement lease or scrub lease, not substantially of a greater area than is sufficient for the maintenance of a home. The vendor is paid by the Crown as heretofore, but the transfer is made direct to the purchaser.

(iv) *Areas Acquired and Disposed of.* Up to the 30th June, 1924, 1,841 estates had been opened for settlement under the Closer Settlement Acts.

The number of farms allotted under the Promotion Section of the Closer Settlement Act to date is 3,731, the area 1,774,920 acres, and the amount advanced £8,254,009.

The following statement gives particulars of the aggregate areas opened up to the 30th June in each year from 1920 to 1924 :—

CLOSER SETTLEMENT AREAS.—NEW SOUTH WALES, 1919-20 TO 1923-24.

Year ended 30th June—	Areas.			Capital Values.		
	Acquired Lands.	Adjoining Crown Lands	Total.	Acquired Lands.	Adjoining Crown Lands.	Total.
	Acres.	Acres.	Acres.	£	£	£
1920 ..	2,461,366	94,254	2,555,620	8,701,359	175,331	8,876,690
1921 ..	3,122,415	94,881	3,217,296	11,010,116	176,164	11,186,280
1922 ..	3,454,422	94,881	3,549,303	13,006,776	176,164	13,182,940
1923 ..	3,783,204	96,958	3,880,162	13,670,070	183,223	13,853,293
1924 ..	3,798,493	96,958	3,895,451	13,719,343	183,223	13,902,566

The total area thus set apart has been divided into 7,707 farms, comprising 3,858,669 acres, the remaining area being reserved for recreation areas, roads, stock routes, schools, etc.

The following table gives particulars as to the disposal of the farms by closer settlement purchase for the years ended the 30th June, 1920 to 1924 :—

CLOSER SETTLEMENT ALLOTMENTS.—NEW SOUTH WALES, 1919-20 TO 1923-24.

Year ended 30th June—				Farms Allotted to Date.			Total Amount received in respect of Settlement Purchases.
				Number.	Area.	Value.	
				No.	Acres.	£	£
1920	..	..	..	4,720	3,154,480	7,392,122	1,349,393
1921	..	..	..	5,933	2,866,636	9,829,075	1,670,995
1922	..	..	..	6,724	3,335,677	11,746,978	2,136,307
1923	..	..	..	6,759	3,380,634	11,903,855	2,538,553
1924	..	..	..	7,585	3,799,132	13,752,891	2,932,033

2. *Victoria.*—(i) *Acquisition of Land.* For the purposes of closer settlement, the Closer Settlement Board may either by agreement or compulsorily acquire blocks of private land, and may also ratify any agreement made between persons resident in Victoria and an owner of land for the purchase thereof, and dispose of such land under the Closer Settlement Act. The payment for the land is made in Victorian Government stock or debentures.

(ii) *Disposal of Land.* All land acquired under the Closer Settlement Act is disposed of as conditional purchase leases, which are of three kinds :—(a) Farm allotments, each of which must not exceed £2,500 in value ; (b) workmen's homes allotments, not exceeding £250 in value ; and (c) agricultural labourers' allotments, not exceeding £350 in value. Land for public purposes may be sold in fee-simple. Land in irrigation districts is also disposed of under the Closer Settlement Act by the State Rivers and Water Supply Commission.

(iii) *Sales of Land.* Land for public purposes may be sold in fee-simple, at a price fixed by the Board, but the area of each site must not exceed 1 acre for a church or public hall, 2 acres for a butter factory or creamery, 5 acres for a school, packing-shed, cool stores, fruit works, or cemetery, or 15 acres for a quarry or recreation reserve.

(iv) *Conditional Purchase Leases.* A conditional purchase lease is for such a term of years as may be agreed upon between the lessee and the Board, and provides for the payment of the value of the land, with interest at not less than $4\frac{1}{2}$ per cent., in not more than 73 half-yearly instalments. The principal conditions under which a lease is held are as follows :—(a) Noxious animals and weeds must be destroyed within 3 years ; (b) the land must be fenced in within one year ; (c) personal residence during 8 months of each year or residence by an approved deputy for the first 5 years is necessary ; (d) improvements must be effected to the value of 2 instalments during the first year, to the value of 10 per cent. of the purchase money before the end of the third year, and to a further 10 per cent. before the end of the sixth year, or, if the residence condition is fulfilled by deputy, to the value of 10 per cent. of the purchase money during the first year, and to the value of 30 per cent. before the end of the sixth year ; (e) on a workman's home allotment, a dwelling house of the value of at least £50 must be erected within one year and additional improvements to the value of £25 within 2 years ; and (f) on an agricultural labourer's allotment, a dwelling house of the value of at least £30 must be erected within one year. After a period of 12 years, provided that all conditions are complied with and the full purchase-money is paid, a Crown grant may be issued.

(v) *Conditional Purchase Leases in Mountainous Areas.* In mountainous areas, the Minister may direct that no instalments of purchase-money and interest need be paid for a period not exceeding 10 years, and the term of the lease is extended accordingly. Interest at the rate of 5 per cent. for the free period is added to the capital value. During each year of such period, the lessee must reduce at least one-tenth part of the allotment to a state of clear grass or cultivation.

(vi) *Areas acquired and made available for Closer Settlement.* The following statement shows the operations under the provisions of the Closer Settlement Acts up to the 30th June, 1920 to 1924 :—

CLOSER SETTLEMENT.—VICTORIA, 1919-20 TO 1923-24.

(INCLUDING IRRIGATED AREAS.)

Year ended 30th June.	Total Area Acquired by Government to Date.	Total Cost to Date.	How Made Available for Settlement.						Number of Applications Granted to Date.	Total Receipts to Date.	Repayments of Principal to Date.	Area Available for Settlement.
			Farm Allotments.	Workmen's Homes Allotments.	Agricultural Labourers' Allotments.	Town Allotments. (a)	Roads and Reserves.					
	Acres.	£	Acres.	Acres.	Acres.	Acres.	Acres.	No.	£	£	Acres.	
1920	573,730	4,269,050	528,502	784	4,470	34,400	4,499	4,469	2,690,934	851,888	21,069	
1921	575,900	4,298,765	524,369	784	4,446	41,830	4,471	4,490	3,183,045	992,320	10,979	
1922	582,870	4,346,383	530,383	784	3,966	43,320	4,417	4,534	4,454,582	1,098,296	7,922	
1923	737,832	5,299,035	670,956	784	3,788	43,236	4,990	4,758	4,794,908	1,202,777	99,573	
1924	849,682	6,377,166	770,374	784	3,675	49,900	5,016	5,284	5,193,488	1,347,232	47,547	

(a) Includes all land sold other than under Conditional Purchase Lease.

3. *Queensland.*—(i) *Acquisition of Land.* The Minister, with the approval of the Governor in Council, may acquire for the Crown, either by agreement or compulsorily, private land in any part of Queensland. The purchase-money may be paid either in cash, or, at the option of the Minister and with the consent of the owner of the land, wholly or in part by debentures. Not more than £500,000 may be expended in any one financial year in purchasing land. The land so acquired may be disposed of as perpetual leases only.

(ii) *Perpetual Lease Selections.* These leases are subject to the same conditions as similar leases under the Land Act. The capital value is fixed by the Governor in Council, but must not be less than the price actually paid for the land with 10 per cent. added thereto. The annual rent for the first 15 years is determined by the Minister, but must not exceed the rate paid by the Crown as interest on the purchase-money for the particular estate of which the land forms part, and for each subsequent period of 15 years by the Land Court at a sum equal to 5 per cent. of the unimproved capital value.

(iii) *Settlement Farm Leases.*—The maximum area allowed to any one person is 3,840 acres. The term of the lease must not exceed 28 years, divided into periods of 7 years. The annual rent for the first period is as stated in the opening notification, and rent for each subsequent period is determined by the Land Court. The lease must be enclosed within 3 years with a good and substantial stock-proof fence, rabbit-proof fence, marsupial-proof fence or fence which is both marsupial-proof and rabbit-proof. Conditions for the destruction of noxious weeds, the cultivation of a specified area, or the making of water improvements may also be imposed. A settlement-farm lease is subject to the condition of personal residence during the whole term.

(iv) *Perpetual Town, Suburban, and Country Leases.* Perpetual leases of town, suburban, and country lands may be sold by auction, as is the case under the Land Act, the conditions of tenure being the same, except that the rent for the first 15 years is fixed at 5 per cent. of the upset price or price bid, whichever is the greater, and for further periods of 15 years at 5 per cent. of the unimproved value of the land or of the amount bid at auction, whichever is the greater.

(v) *Areas Acquired and Selected.* The total area acquired to the end of 1924 was 785,311 acres, costing £1,955,061, no fresh purchases having been made since 1916. The following table gives particulars of transactions under the Closer Settlement Act at the end of each of the years 1920 to 1924 :—

CLOSER SETTLEMENT.—QUEENSLAND, 1920 TO 1924.

Particulars.	1920.	1921.	1922.	1923.	1924. (a)
Total area selected Acres	737,850	742,284	744,423	744,719	744,390
Number of selectors No.	2,370	2,393	2,352	2,398	2,399
Agricultural farms No.	2,143	2,121	2,112	2,118	2,117
Unconditional selections No.	256	257	256	256	256
Perpetual lease selections No.	489	535	556	563	564
Prickly-pear selections No.	4	4	4	4	4
Perpetual lease prickly-pear selections .. No.	1	2	4	3	3
Area sold by auction Acres	12,390	12,510	12,541	12,582	12,582

(a) 30th June.

4. South Australia.—(i) *Acquisition of Land.* The Commissioner of Crown Lands may acquire land at a cost of not more than £600,000 in two financial years, either by agreement or compulsorily.

(ii) *Sales by Auction.* Town lands may be sold by auction for cash. Blocks which are unallotted after one year may also be sold by auction, 25 per cent. of the purchase money being paid in cash, and the balance in 5 yearly instalments with interest.

(iii) *Agreements to Purchase.* Land acquired for closer settlement is divided into blocks, but no block may exceed £4,000 in unimproved value unless suitable for pastoral purposes only, in which case the limit is £5,000. The land so divided is open to conditional purchase, the applicant agreeing (a) to reside thereon for 9 months in each year; (b) to fence it in within 5 years; (c) to spend thereon in improvements during each of the first 5 years a sum equal to £3 for every £100 of the purchase-money; and (d) to pay for the block either (1) in 35 years, in half-yearly instalments, of which the first ten are to be equal and calculated at the fixed rate on the purchase-price, and each of the subsequent 60 instalments at a rate sufficient to repay during the 35 years the price together with interest at a fixed rate on the balance thereof; or (2) if the Commissioner so directs, in 64 years in half-yearly instalments, of which the first sixteen are at the rate of £1 11s. 5d. for every £100 of the purchase-money and the remaining instalments calculated at a rate sufficient to repay the price together with interest on the unpaid balance.

(iv) *Miscellaneous Leases.* Any blocks remaining unallotted for one year may be let on miscellaneous lease at a rental and upon such terms as are determined by the Land Board.

(v) *Areas Acquired and Selected.* The following table shows the area of land acquired for the purposes of closer settlement, and the manner in which it has been dealt with for the years ending 30th June, 1920 to 1924 :—

CLOSER SETTLEMENT.—SOUTH AUSTRALIA, 1920 TO 1924.

Year ended 30th June—	Area of Lands Re-purchased.	Agree-ments with Covenants to Purchase.	Total Area Leased as Homestead Blocks.		Perpetual Leases.	Mis-cellaneous Leases.	Sold.	Remainder Un-occupied (including Roads).
			Right of Purchase.	Perpetual Lease.				
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1920 ..	761,285	515,805	556	1,476	53,048	144	153,522	36,134
1921 ..	783,863	519,474	496	1,412	46,475	144	167,211	48,651
1922 ..	783,863	513,118	492	1,327	45,932	144	176,441	46,409
1923 ..	729,141	513,241	473	1,342	50,103	144	127,012	36,828
1924 ..	729,141	509,040	440	1,342	50,208	171	137,934	30,006

The total area repurchased at 30th June, 1924, was 729,141 acres. The purchase money was £2,419,631. Of the total area, 699,135 acres had been allotted to 3,067 persons, the average area to each being 228 acres.

5. *Western Australia.*—(i) *Acquisition of Land.* Under the Agricultural Lands Purchase Act the Minister may purchase any land which an owner may offer to surrender at a price to be named in the offer, provided that such land is situated within 20 miles of an existing railway, or of one the construction of which is authorized by Parliament. Not more than £1,200,000 may be thus spent. The Minister may also improve any such acquired land prior to disposing of it, and the cost of such improvements must be added to the price at which it is sold to the selector.

(ii) *Disposal of Land.* Land acquired for closer settlement may be disposed of either as town and suburban areas, or under conditional purchase.

(iii) *Conditional Purchases.* Such land as is not reserved for roads, reserves, town and suburban areas, etc., is thrown open for selection under conditional purchase. The selling price is ascertained by adding to the price actually paid for the land 5 per cent. thereof and the cost of all improvements thereon, as well as the cost of subdivision and survey-fee. Payment is to be made in half-yearly instalments extending over a period not exceeding 30 years. The maximum area which may be held by one person is 1,000 acres of cultivable land, or 2,500 acres of grazing land. In other respects the conditions are the same as those for ordinary conditional purchases.

(iv) *Town and Suburban Areas.* The Minister may dispose of town and suburban lands in the same manner as they may be disposed of under the Land Act.

(v) *Areas Acquired and Selected.* There has been no purchase of land for closer settlement purposes for several years, the total area acquired up to the 30th June, 1924, being 446,804 acres, costing £439,872. Of this area 15,825 acres have been set aside for roads, reserves, etc., leaving a balance of 430,979 acres available for selection. The following table gives particulars of operations under the Act for the years ending 30th June, 1920 to 1924 :—

CLOSER SETTLEMENT.—WESTERN AUSTRALIA, 1919-20 TO 1923-24.

Particulars.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
Area selected during the year Acres	40,653	8,979	11,193	44,866	..
Total area occupied to date Acres	336,707	343,237	351,282	396,148	396,148
Balance available for selection Acres	94,272	87,742	79,697	73,657	73,657
Total Revenue .. £	363,814	382,202	400,563	433,805	412,872

6. *Tasmania.*—(i) *Acquisition of Land.* The Minister may either (a) purchase by agreement and acquire for the Crown private land ; or (b) compulsorily acquire and take for the Crown blocks of private land. Land may be acquired only when the unimproved value thereof exceeds £12,000. Land may also be acquired by agreement when three or more persons are desirous of obtaining private land belonging to the same owner. Payment may be made in cash, or in debentures or stock bearing interest at 4½ per cent., or partly in debentures or stock at the option of the owner and with the consent of the Minister. Not more than £100,000 may be raised annually for closer settlement purposes, and the total amount borrowed must not exceed £500,000. Land so acquired may be disposed of either by leases with right of purchase or by special sales.

(ii) *Leases with Right of Purchase.* Land acquired under the Closer Settlement Act is thrown open to be leased for a term of 99 years, with the condition that the lessee has the right to purchase the same after ten years, provided that he does not own land (exclusive of the lease) of a value exceeding £1,500, exclusive of buildings, and has complied with all the following conditions :—(a) The land must be improved to the value of 2½ per cent. of the capital value in each of the first 10 years ; (b) the lessee himself, or his wife, or child over 18 years of age must reside on the lease within 2 years, for 8 months in each of the following 8 years, and the lessee may not transfer, mortgage or

sublet his lease without the approval of the Minister; and (c) prescribed conditions relating to mining and cultivation, the destruction of pests and noxious weeds, etc., must be complied with. Under ordinary circumstances no allotment may exceed £1,500 in value, exclusive of any buildings thereon, but the Minister may increase the value up to £4,000.

(iii) *Special Sales.* The Minister may sell land in fee-simple as sites for (a) churches or public halls, not exceeding 1 acre; or (b) dairy factories, fruit-preserving factories, mills, or creameries, not exceeding 5 acres. The price of such land must not be less than the cost thereof, and must be paid in cash. The Minister may also reserve an area up to 100 acres in extent for township purposes, and sell blocks thereof for cash or on credit under the same conditions as those contained in the Crown Lands Act. Land not suitable for disposal by way of lease may be sold in fee-simple either by auction or by private contract.

(iv) *Areas Acquired and Selected.* Up to the 30th June, 1924, 34 areas had been opened up for closer settlement. The total purchase money paid by the Government was £365,148, and the total area acquired amounted to 100,727 acres, including 11,477 acres of Crown land. Particulars for the years 1920 to 1924 are given in the following statement :—

CLOSER SETTLEMENT.—TASMANIA, 1920 TO 1924.

Year ended 30th June—	Number of Farms made Available.	Number of Farms Allotted.	Area of Farms Allotted.	Rental of Farms Allotted.	Total Area Purchased.
	No.	No.	Acres.	£	Acres.
1920	5	5	756	492	1,647
1921	6	6	11,113	786	11,113
1922 .. ..	..	..	..	..	3,618
1923 .. ..	..	3	685	..	810
1924 .. ..	..	..	..	..	..

7. *Summary.*—The following table gives particulars of operations under the Closer Settlement Acts at the 30th June, 1924 :—

**CLOSER SETTLEMENT.—TOTAL AREAS ACQUIRED AND ALLOTTED AT
30th JUNE, 1924.**

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
Area acquired .. acres	3,798,493	849,682	785,311	729,141	446,804	100,727	6,710,158
Purchase price £	13,719,343	6,377,176	1,955,061	2,419,631	439,872	365,148	25,276,231
Farms, etc., { No.	7,585	5,871	2,399	3,067	1,133	303	20,358
allotted { acres	3,799,132a	777,186	744,390	699,135	396,148	81,597	6,497,588

(a) Includes adjoining Crown lands added to Closer Settlement Areas.

The next table shows the areas of private lands acquired at the end of each financial year from 1920 to 1924 :—

CLOSER SETTLEMENT.—AREAS OF PRIVATE LANDS ACQUIRED, 1920 TO 1924.

Year ended 30th June.	N.S.W.	Victoria.	Q'land. (c)	S. Aust.	W. Aust.	Tasmania.	Total.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1920	2,461,366	569,808	785,311	710,559	446,804	76,073 (a)	5,049,921
1921	3,122,415	572,262	785,311	726,283	446,804	84,053 (a)	5,737,128
1922	3,454,422	579,010	785,311	726,283	446,804	99,917 (b)	6,091,747
1923	3,783,204	737,882	785,311	729,141	446,804	100,727 (b)	6,583,069
1924	3,798,493	849,682	785,311	729,141	446,804	100,727 (b)	6,710,158

(a) Including 10,382 acres of Crown lands.

(b) Including 11,477 acres of Crown lands.

(c) Year ended 31st December.

§ 7. Leases and Licences under Mining Acts.

1. New South Wales.—(i) *Holdings under Miners' Rights.* A holder of a miner's right, costing 5s. annually, is entitled to occupy Crown lands for the purpose of mining thereon. The size of a claim varies according to the nature of the mineral worked and the distance from existing workings. The principal condition of tenure is that work must be continuously carried on, unless exemption is granted. A holder of a miner's right may obtain an authority to enter and prospect on certain private lands. Water rights, machinery areas, and similar holdings may also be taken up under a miner's right.

(ii) *Gold-mining Leases.* A gold-mining lease is issued for a term not exceeding 20 years, with right of renewal for another 20 years. The maximum area granted is 25 acres, and the annual rent is 2s. per acre. A royalty of 1 per cent. of the value of all gold and minerals won must be paid to the State. Labour must be constantly employed—unless exemption is granted—at the rate of one man to every 5 acres during the first year of the lease, and thereafter one man to every 2 acres.

(iii) *Mineral Leases.* The maximum area which may be leased for mining for other than gold, coal, or oil is 80 acres. The rental and royalty are the same as for a gold-mining lease, but the labour conditions are one man to every 20 acres during the first year and one man to every 10 acres thereafter.

(iv) *Coal and Oil-mining Leases.* The term of a lease for coal or oil-mining is 20 years, the maximum area 640 acres, the rental 2s. per acre, and the royalty 6d. per ton on all coal or shale won, and 1 per cent. of the value of all oil won. Two men must be employed to each area of 320 acres.

(v) *Business Licences.* A business licence, issued at an annual fee of £1, entitles the holder to occupy for the purpose of carrying on business not more than $\frac{1}{4}$ acre in a town or village, or 1 acre outside, on any gold or mineral field. No person may hold more than one area.

(vi) *Residence Areas.* A holder of a miner's right may occupy as a residence area not more than $\frac{1}{4}$ acre in a town or village, or 2 acres outside, on any gold or mineral field. Improvements to the value of £10 must be effected thereon, and no person may hold more than one area.

(vii) *Areas Occupied under Mining Acts.* The following table gives particulars of operations for the years 1920 to 1924. Of the 1,250 acres leased for gold-mining, 334 acres were leased for dredging for gold.

AREAS TAKEN UP UNDER MINING ACTS.—NEW SOUTH WALES, 1920 TO 1924.

Purposes for which Issued or Occupied.	1920.	1921.	1922.	1923.	1924.
AREAS TAKEN UP DURING YEAR.					
Gold-mining	Acres. 2,168	Acres. 3,120	Acres. 3,187	Acres. 3,088	Acres. 1,250
Mining for other minerals ..	22,535	21,759	11,358	22,280	19,792
Authorities to prospect ..	14,216	3,487	1,714	14,241	6,968
Other purposes	387	379	513	534	482
Total	39,306	28,745	16,772	40,143	28,492
TOTAL AREAS OCCUPIED AT END OF YEAR.					
Gold-mining	9,953	9,061	10,870	10,428	8,171
Mining for other minerals ..	229,509	248,568	263,227	280,756	281,751
Authorities to prospect ..	58	5,224	866	9,179	2,461
Other purposes	5,939	5,998	6,540	6,973	7,305
Total	245,459	268,851	281,503	307,336	299,688

2. *Victoria.*—(i) *Holdings under Miners' Rights.* Under a miner's right, costing 2s. 6d. annually, a miner may take up a claim on Crown lands, the area of which varies according to the nature of the ground and whether gold or minerals are to be won, conditionally on such claim being worked continuously, unless exemption is granted. Under the same tenure water rights, machinery areas, etc., may be obtained.

(ii) *Gold-mining Leases.* A gold-mining lease is granted for a period not exceeding 15 years, renewable for a further 15 years, but no maximum area is prescribed. The rent is 2s. 6d. per acre per annum, and the labour conditions are as specified in the lease; but, under certain circumstances, the expenditure of a specified amount of money may be substituted for the labour conditions.

(iii) *Mineral Leases.* A mineral lease is issued for the same period as a gold-mining lease, at a rental of not less than 1s. nor more than £5 per acre per annum, as the Minister may determine, no royalty being charged except for coal. The area must not exceed 640 acres, and the Minister fixes the amount of labour to be employed, or, alternatively, the amount of money to be expended annually.

(iv) *Business Areas.* The holder of a business licence is entitled to occupy $\frac{1}{2}$ acre of Crown lands in a city or town, or $\frac{1}{2}$ acre in a borough, or 1 acre outside, for the purpose of residence and carrying on his business. A business licence costs 10s. a year in a city, town, or borough, or 5s. outside, together with 5 per cent. of the value of the land. A business area must be continuously occupied, unless exemption is obtained.

(v) *Residence Areas.* The holder of a miner's right may occupy a residence area of the same dimensions as a business area under the same conditions of occupation, but no further payment than the cost (2s. 6d.) of the miner's right is required.

(vi) *Leases and Licences Issued.* During the year 1924, the number of leases, licences, etc., issued was 184, covering an area of 8,247 acres, the rent, fees, etc., for which amounted to £1,300. The following table gives particulars of operations for the years 1920 to 1924 :—

AREAS TAKEN UP UNDER MINING ACTS.—VICTORIA, 1920 TO 1924.

Particulars.	1920.	1921.	1922.	1923.	1924.
	Acres.	Acres.	Acres.	Acres.	Acres.
Area taken up during year ..	7,032	10,696	6,699	9,207	8,247
Area occupied at end of year ..	48,561	52,892	49,178	47,361	43,216

3. *Queensland.*—(i) *Holdings under Miners' Rights.* The holder of a miner's right, costing 5s. a year, may take up a prospecting area or a claim, the areas of which vary according to the nature of the mineral sought for or worked, and the distance from existing workings. Such land must be worked continuously, unless exemption is granted. A holder of a miner's right is also entitled to cut races, reside on Crown land, cut timber thereon, etc.

(ii) *Permits to Prospect for Petroleum.* Any person may apply for a permit to prospect for petroleum. An area not exceeding 10,000 acres is allowed for a period of 2 years, and not more than two such permits may be held at the one time. A preferential right to a permit may be obtained for a period of 30 days by erecting a post or monument on the land and posting a notice in accordance with the Petroleum Act of 1923. A rental of 1d. per acre per annum is payable for the land included in the permit. Within a year the holder of the permit must erect an adequate drilling outfit on the land and commence drilling, and within 2 years drill at least 2,000 feet.

(iii) *Licences to Prospect for Coal or Mineral Oil.* Any person may apply for a licence for one year to prospect Crown land for coal or mineral oil. An area of 2,560 acres at a rental of 1d. per acre is allowed. The licence may be renewed for one year.

(iv) *Gold-mining Leases.* The term of a gold-mining lease is 21 years, renewable for a further period of 21 years, and the maximum area is 50 acres, except in the case of

a special lease, when 300 acres may be selected. The rent is £1 per acre per annum. One man must be kept constantly employed for every 4 acres, unless exemption is obtained.

(v) *Mineral Leases.* The term of a mineral lease is the same as that of a gold-mining lease, but the maximum area is, in the case of petroleum, one-fourth of the area included in the prospecting permit, with a preferential right to a further lease or leases of the balance of the area; 320 acres for mineral oil; 640 acres for coal; and 160 acres for other minerals. The annual rent per acre is (a) 1s. for coal and mineral oil, (b) 2s. for the first 2,500 acres and 4s. for the balance in the case of petroleum, and (c) 10s. for other minerals. The labour conditions are:—(a) For coal, one man for every 40 acres during the first 2 years, then one man for every 20 acres, or, alternatively, an expenditure during each half-year of £100 for every 40 and 20 acres respectively; (b) for petroleum, the installation of a drilling plant within 3 months, and the drilling of wells one at a time until a well has been drilled for every 100 acres; and (c) for other minerals, one man for every 10 acres. A royalty is payable of from 4d. to 1s. per ton on all coal raised, and of 12½ per cent. of the value of all petroleum won, there being no royalty on other minerals.

(vi) *Business Areas.* The holder of a business licence, the fee for which is £2 a year, may occupy ½ acre of land on a gold or mineral field for the purpose of carrying on a business, and must occupy the same continuously, but is entitled to obtain exemption from occupation after having expended the sum of £10 on improvements. No person may occupy more than one area with one licence.

(vii) *Residence Areas.* The holder of a miner's right may take up a residence area of ¼ acre on a gold or mineral field, but may hold only one such area on the same field. Occupation is necessary in order to hold the ground, but exemption can be obtained under certain circumstances.

(viii) *Miners' Homestead Perpetual Leases.* A person, resident on a mining field, and otherwise qualified, also any corporate body carrying on business on the field, may take up a lease or leases not exceeding in area (a) 1 acre in a city, town, or township; or (b) 20 acres within 1 mile of a city, town, or township; or (c) from 80 to 640 acres outside such limits. The rent in the case of a lease sold at auction is 3 per cent. of the purchase price, and in other cases 1½ per cent. of the notified capital value of the land. The land is subject to re-appraisal every 10 years. The title is a lease in perpetuity and the land must be occupied and improved.

(ix) *Areas held under Lease or Licence.* During the year 1924 the number of miners' rights issued was 4,088, and of business licences 17. The following table gives particulars regarding the areas of land taken up under lease or licence, and the total areas occupied for the years 1920 to 1924. In addition, an area estimated at 9,000 acres was at the end of 1924 held under miners' rights.

AREAS TAKEN UP UNDER MINING ACTS.—QUEENSLAND, 1920 TO 1924.

Particulars.	1920.	1921.	1922.	1923.	1924.
AREAS TAKEN UP DURING YEAR.					
	Acres.	Acres.	Acres.	Acres.	Acres.
Gold-mining	246	61	354	253	225
Mining for other minerals	1,205	953	597	5,560	6,694
Coal-prospecting licences	6,942	63,217	26,425	21,202	8,276
Miners' homestead leases	31,006	33,469	31,019	8,679	8,329
Mineral oil-prospecting areas .. .. .	..	..	1,280	4,160	2,000
Petroleum prospecting areas .. .. .	..	..	118,525	25,900	90,000
Total	39,399	97,700	178,200	67,754	115,524

AREAS TAKEN UP UNDER MINING ACTS.—QUEENSLAND, 1920 TO 1924—
continued.

Particulars.	1920.	1921.	1922.	1923.	1924.
TOTAL AREAS OCCUPIED AT END OF YEAR.					
	Acres.	Acres.	Acres.	Acres.	Acres.
Gold-mining	2,032	1,620	1,313	1,279	1,191
Mining for other minerals ..	31,908	33,370	30,954	22,012	28,753
Coal-prospecting licences ..	6,942	63,217	26,425	21,202	8,276
Miners' homestead leases ..	286,998	314,161	322,640	329,453	335,133
Mineral oil-prospecting areas ..	..	..	1,280	4,160	2,000
Petroleum-prospecting areas ..	..	..	118,525	66,480	123,705
Total	327,880	412,368	501,137	444,586	499,058

4. *South Australia.*—(i) *Holdings under Miners' Rights.* A miner's right costs 5s. per annum, and entitles the holder to take up a prospecting claim, a mining claim, a machinery area, a water right, etc. He is also entitled to take up a lease for mining purposes for a term not exceeding 21 years. The area of an alluvial gold claim is 100 feet by 100 feet, of a reef gold claim, 330 feet by 660 feet, of a precious stones claim, 150 feet by 150 feet, and of a mineral claim 40 acres. A gold or precious stones claim must be constantly worked by one man, a mineral claim by one man for each 20 acres, and a coal or oil claim by eight men.

(ii) *Search Licences.* A search licence may be issued to the holder of a miner's right entitling him to search on any specified mineral lands, not exceeding 5 square miles in area, for precious stones, mineral phosphates, oil, or rare minerals, which have hitherto not proved payable. The licence is in force for 12 months, and the fee is £1 for every square mile. One man at least must be employed for every 640 acres. A licensee has a preferential right to a mineral lease of 40 acres for rare metals, of 100 acres for mineral phosphates, and of 640 acres for oil, or to a precious stones claim of 150 feet by 150 feet.

(iii) *Gold Leases.* A gold lease must not exceed 20 acres in area. The rent is 1s. per acre per annum, and a royalty of 6d. in the pound of the net profits must be paid. The labour conditions are one man to every 5 acres. For gold dredging, the maximum area allowed is 200 acres.

(iv) *Mineral Leases.* The maximum areas which may be taken up as mineral leases are for (a) coal, oil, salt, and gypsum, 640 acres; (b) mineral phosphates, 100 acres; and (c) other minerals, 40 acres. The annual rent per acre is for (a) coal or oil 6d., until a marketable quantity is produced, then 1s.; and for (b) other minerals, 1s., except that a higher rent may be charged for salt or gypsum. A royalty of 6d. in the pound of the net profits is payable in the case of all minerals. The labour conditions vary according to the class of mineral won, being (a) for coal and oil, one man to every 40 acres; (b) for barytes, ochre, etc., one man for 3 months in each year; (c) for gypsum, two men for every 40 acres; (d) for salt, one man for every 40 acres from January to April; and (e) for other minerals, one man to every 10 acres.

(v) *Business Areas.* Any person may, on payment of £1 per annum, obtain a business licence entitling him to occupy a business claim of $\frac{1}{2}$ acre in a township, or of 1 acre elsewhere, but no person may own or occupy more than one such claim, and business must be continuously carried on thereon.

(vi) *Residence Areas.* The owner of a claim, while actively engaged in prospecting or mining thereon, may occupy a residence site not exceeding $\frac{1}{2}$ acre, but, in order to hold the same, must reside thereon.

(vii) *Occupation Licences.* Any person may be granted an occupation licence authorizing him to occupy for the purpose of residence and cultivation $\frac{1}{2}$ acre of Crown lands at a rental of not less than 2s. per annum. Such licence is in force for 14 years, and may be renewed from time to time until the land is required for public purposes.

(viii) *Areas Occupied under Mining Acts.* The following table gives particulars of operations for the years 1920 to 1924:—

**AREAS TAKEN UP UNDER MINING ACTS.—SOUTH AUSTRALIA,
1920 TO 1924.**

Particulars.	1920.	1921.	1922.	1923.	1924.
AREAS TAKEN UP DURING YEAR.					
	Acres.	Acres.	Acres.	Acres.	Acres.
Gold-mining leases	37	130	127	240	269
Mineral and miscellaneous leases	19,855	5,617	5,120	2,589	5,766
Claims	176,758	52,164	34,827	36,026	32,019
Search licences	381,440	515,840	397,440	571,520	473,600
Occupation licences	4	5	5	2	2
Total	578,094	573,756	437,519	610,377	511,656

TOTAL AREAS OCCUPIED AT END OF YEAR.

Gold-mining leases	748	765	827	905	840
Mineral and miscellaneous leases	52,877	55,882	58,682	55,505	57,959
Claims	168,131	69,982	55,791	62,995	61,853
Search licences	381,440	515,840	397,440	534,400	465,280
Occupation licences	101	101	101	94	93
Total	603,297	642,570	512,841	653,899	586,025

5. *Western Australia.*—(i) *Holdings under Miners' Rights.* A miner's right, costing 5s. a year, entitles the holder to take up a prospecting area or a claim and occupy Crown land for mining purposes or as an authorized holding. He may also construct water-races, dams, tramways, etc. Prospecting areas and claims are of various dimensions, and are held conditionally on being worked continuously.

(ii) *Gold Mining Leases.* A gold mining lease is granted for a period of 21 years, with the right of renewal for a further 21 years, and may contain an area of 24 acres. The rental is 5s. per acre for the first year, and £1 per acre for subsequent years. If the ground has been previously worked and abandoned, a lease may contain 48 acres, and the annual rent be not less than 5s. per acre nor more than £1 per acre. In the former case, not less than two men must be employed during the first 12 months, and then one man for every 6 acres, and in the latter case one man for every 12 acres.

(iii) *Mineral Leases.* The term of a mineral lease is 21 years, renewable for a similar period, and the maximum area allowed is (a) for coal, 320 acres, or for the holder of a prospecting area, 640 acres; (b) for oil, 48 acres for an ordinary lease, and 640 acres for a reward lease; (c) for precious stones, 24 acres; and (d) for other minerals, ordinary lease, 48 acres, and lease on abandoned ground, 96 acres. The annual rental per acre is for (a) 6d.; (b) ordinary lease, 6d., reward lease, a peppercorn for the first 5 years; and (c) and (d) ordinary lease, 5s., and extended lease not less than 2s. as the Governor may determine. A royalty of 3d. per ton during the first 10 years and of 6d. per ton for the balance of the lease is payable in the case of coal, and, in the case of oil, the royalty is 10 per cent. of the gross value of the output. The labour conditions are for coal and oil, during the first year, one man; during the second year, two men; and thereafter three men for every 60 acres; and for other minerals, two men for the first year, and then one man for every 6 acres of an ordinary lease, and for every 12 acres of an extended lease.

(iv) *Business Areas.* A holder of a miner's right may take up a business area not exceeding 1 acre in extent, and must occupy the same for carrying on business, but he may obtain exemption from occupation for 6 months, provided that he has effected improvements thereon to the value of £50.

(v) *Residence Areas.* A residence area of $\frac{1}{4}$ acre may be held by the holder of a miner's right, provided that he occupies the same. After expending £10 on improvements he may obtain exemption from residence for 6 months.

(vi) *Miners' Homestead Leases.* A miner, resident on a gold or mineral field, may be granted a miner's homestead lease not exceeding (a) 20 acres, if within 2 miles of the nearest boundary of any township or suburban area; or (b) 500 acres if beyond, at an annual rental, for the first 20 years, of (a) 2s. per acre, where the area does not exceed 20 acres; and (b) 6d. per acre where such area is exceeded, and thereafter 1s. if demanded. Within 3 years the lessee must fence in the land, and within 5 years must improve it to the value of 10s. per acre.

(vii) *Particulars of Areas Occupied.* The following table gives particulars of operations for the years 1920 to 1924. These figures are exclusive of holdings under miners' rights and mineral oil-licences. Of the areas shown as taken up in 1924, the area under lease was 2,634 acres for gold-mining, 3,771 for mining for other minerals, 230 for miners' homesteads, and 10 for miscellaneous leases—a total of 6,645 acres. The balance was taken up under licences.

**AREAS TAKEN UP UNDER MINING ACTS.—WESTERN AUSTRALIA,
1920 TO 1924.**

Particulars.	1920.	1921.	1922.	1923.	1924.
AREAS TAKEN UP DURING YEAR.					
	Acres.	Acres.	Acres.	Acres.	Acres.
Gold-mining	36,067	17,291	17,836	21,722	14,303
Mining for other minerals	37,599	73,561	42,509	15,772	11,073
Other purposes	1,033	2,181	1,537	73	311
Total	74,699	93,033	61,882	37,567	26,287
TOTAL AREAS OCCUPIED AT END OF YEAR.					
	36,070	21,600	25,011	24,574	17,759
Gold-mining	96,036	101,322	78,073	66,036	38,006
Mining for other minerals	38,485	38,397	37,896	37,219	34,783
Other purposes					
Total	170,591	161,319	140,980	127,829	90,548

6. *Tasmania.*—(i) *Holdings under Miners' Rights.* A miner's right is issued to any person at a fee of 5s. for a year, expiring on the 31st December next after the date of issue, and entitles the holder to take possession of Crown land and to mine thereon, also to construct water-races, build a residence thereon, etc. An ordinary claim for a single holder contains $\frac{1}{2}$ acre.

(ii) *Prospectors' Licences.* A prospector's licence, issued at a fee of 10s. for a year ending on the 31st December, empowers the licensee to take up a claim for the purpose of prospecting for gold or minerals. Such claim may be an ordinary claim with an area of up to 40 acres, or an extended claim up to 320 acres, and both must be worked continuously.

(iii) *Gold-mining Leases.* Any person may be granted a gold-mining lease of any Crown land for a period of 21 years, renewable for a further 21 years. Reward leases may be granted to discoverers of gold, and, under certain circumstances, special leases

may be issued. The maximum area allowed is 40 acres, and the rent is 10s. per acre per annum. At least £10 per acre must be expended annually in mining operations or in works connected therewith.

(iv) *Mineral Leases.* Mineral leases are also issued for a period of 21 years, renewable as in the case of gold-mining leases. The maximum area is—(a) for coal or oil, 640 acres; and (b) for other minerals, 80 acres. The annual rent per acre is—(a) for oil, 1s.; (b) for coal, 2s. 6d.; and (c) for other minerals, 5s. At least £2 per acre must be expended annually. No royalty is charged, except on oil, for which it is fixed at 5 per cent. of the gross value of all crude oil obtained after the first 50,000 gallons.

(v) *Leases and Licences Issued and Areas Occupied.* During the year 1924, the number of leases issued was 178, of which the more important were 47 for gold mining, covering 1,128 acres; 39 for tin, covering 1,076 acres; 9 for serpentine, covering 485 acres; and 8 for iron, covering 639 acres. Nine licences to search for coal and oil were also granted. The following table gives particulars of operations for the years 1920 to 1924:—

AREAS TAKEN UP UNDER MINING ACTS.—TASMANIA, 1920 TO 1924.

Particulars.	1920.	1921.	1922.	1923.	1924.
AREAS TAKEN UP DURING YEAR.					
	Acres.	Acres.	Acres.	Acres.	Acres.
Gold-mining	1,195	530	794	1,074	1,094
Mining for other minerals ..	8,419	10,862	4,309	12,884	11,362
Licences to search for coal or oil ..	..	122,611	25,481	33,473	21,120
Other purposes	176	236	186	104	196
Total	9,790	134,239	30,770	47,535	33,772
TOTAL AREAS OCCUPIED AT END OF YEAR.					
Gold-mining	1,403	1,894	2,424	1,687	1,829
Mining for other minerals ..	42,120	47,562	43,667	37,662	32,498
Licences to search for coal or oil ..	..	117,031	137,692	34,761	39,168
Other purposes	2,857	3,020	3,732	3,517	2,697
Total	46,380	169,507	187,515	77,627	76,192

7. *Northern Territory.*—(i) *General.* Mining generally is governed by the Northern Territory Mining Act passed by the South Australian Legislature in 1903, but special Ordinances have since been promulgated by the Commonwealth respecting tin dredging and mining for mineral oil and coal.

(ii) *Holdings under Miners' Rights.* The fee for a miner's right is 5s. for 12 months from the date of issue, and a holder thereof is entitled to occupy Crown lands for mining purposes, to construct races, to divert water, to reside on his holding, etc.

(iii) *Gold-mining Leases.* The area of a gold-mining lease must not exceed 40 acres, and the term is 42 years, renewable for a further 21 years. The rent must not be less than 1s. per acre per annum. A royalty of 6d. in the pound of the net profits must be paid, and one man must be kept constantly employed for every 10 acres, unless exemption is obtained.

(iv) *Mineral Leases.* Mineral leases may be granted in blocks not exceeding 80 acres each, but no person may hold more than 640 acres altogether nor more than 320 acres in contiguous blocks. A mineral lease is issued for a term not exceeding 99 years, and the rent and royalty are the same as in the case of a gold-mining lease. One man for every 20 acres must be constantly employed during 9 months in each year.

(v) *Tin-dredging Leases.* These leases are issued for a term not exceeding 21 years at a rental of 1s. per acre per annum. The area must not exceed 1,000 acres, and the lessee must, after the first 12 months, keep continuously employed thereon either (a) not less than one man of European race or extraction for every 25 acres; or alternatively (b) fully-manned machinery of a value of not less than £500 for every 100 acres.

(vi) *Mineral Oil and Coal Licences.* A licence to search for mineral oil or coal, or for both, may be granted over an area not exceeding 1,000 square miles for a period of 5 years on payment of an annual fee of £10. At least 4 white men must be employed for not less than 6 months in each year. A holder of a mineral oil licence who discovers payable mineral oil on the land held under his licence has a preferential right to a mineral oil lease of 160 acres, together with a reward area of 640 acres thereon. A discoverer of coal in payable quantities has a preferential right to an area of 640 acres as a coal lease.

(vii) *Mineral Oil and Coal Leases.* Leases may be granted for a period of 21 years, renewable for a further 21 years, for mining for mineral oil or coal, the maximum areas being—(a) for mineral oil, 160 acres; and (b) for coal, 640 acres. In the case of mineral oil, the annual rent is 1s. per acre, and a royalty of 5 per cent. on the gross value of all crude oil obtained is payable; the lessee must also work the land to the satisfaction of the Minister. In the case of coal, the rent and conditions are fixed by regulation.

(viii) *Business Licences.* A business licence is issued at the prescribed fee, and authorizes the holder to occupy on a gold-field, for the purpose of residence and carrying on his business, so much Crown land as is fixed by the Warden who issues the licence.

(ix) *Garden Licences.* The Warden may grant licences to occupy land upon any gold-field or mineral-field to any person for the purpose of growing fruit or other garden produce. The conditions as to rent, etc., are as prescribed, but the area must not exceed 20 acres.

(x) *Areas occupied.* The areas occupied under Mining Acts at the end of 1924 are given on page 171.

8. **Summary.**—The following tables show the total areas of Crown lands for which leases and licences for mining purposes were issued in each State during each year from 1920 to 1924 inclusive, and also the total areas of Crown lands occupied for mining purposes at the end of each year during the same period :—

CROWN LANDS, LEASES AND LICENCES FOR MINING PURPOSES, 1920 TO 1924.

Particulars.	N.S.W.	Victoria (a)	Q'land. (b)	S. Aust. (b)	W. Aust. (b)	Tas. (b)	Total.
AREAS FOR WHICH LEASES AND LICENCES ISSUED DURING YEAR.							
1920 ..	Acres. 39,306	Acres. 7,032	Acres. 39,399	Acres. 578,094	Acres. 74,699	Acres. 9,790	Acres. 748,320
1921 ..	28,745	10,696	97,700	573,756	93,033	134,239	938,169
1922 ..	16,772	6,699	178,200	437,519	61,882	30,770	731,842
1923 ..	40,143	9,207	67,754	610,377	37,567	47,535	812,583
1924 ..	28,492	8,247	115,524	511,656	26,287	33,772	723,978
TOTAL AREAS OCCUPIED AT END OF YEAR.							
1920 ..	245,459	48,561	327,880	603,297	170,591	46,380	1,442,168
1921 ..	268,851	52,892	412,368	642,570	161,319	169,507	1,707,507
1922 ..	281,503	49,178	501,137	512,841	140,980	187,515	1,673,154
1923 ..	307,336	47,361	444,586	653,899	127,829	77,627	1,658,638
1924 ..	299,688	43,216	499,058	586,025	90,548	76,192	1,594,727

(a) Including private lands, leases, and water right licences only. (b) Exclusive of lands held under miners' rights only.

NOTE.—Up to the 31st December, 1924, an area of 24,783,396 acres was under mining leases and licences in the Northern Territory, of which 2,285 acres were under lease, and the balance under licence to prospect for oil and coal.

§ 8. Settlement of Returned Soldiers and Sailors.

1. **New South Wales**—(i) *General*. Special provision is made by the Returned Soldiers Settlements Act for the occupation of land by discharged soldiers and sailors. Crown land or acquired land may be set apart for discharged soldiers and sailors, and obtained by them under the legislation specified, or under the Crown Lands or Closer Settlement Acts.

(ii) *Special Holdings*. The Minister may set apart any area of Crown land or land acquired under the Closer Settlement Act or Murrumbidgee Irrigation Act for sale or lease to discharged soldiers or sailors. In order to obtain a block of such land, the applicant must be certified as qualified by a classification committee. The prices, capital values, rents, charges for water (if supplied), and conditions are determined by the Minister, or by the Water Conservation and Irrigation Commission, as the case may be. The holder of a lease under this section, except in an irrigation area, may apply to purchase the same by 15 annual instalments with $2\frac{1}{2}$ per cent. interest, but residence for 5 years on the land is obligatory.

(iii) *Soldiers Group Purchases*. Under the Returned Soldiers Settlement Act, land may be subdivided into home-maintenance areas and set apart as a group settlement for discharged soldiers as approved by the Minister. Upon being satisfied as to their fitness and suitability, the Minister may allot blocks on such settlement on prescribed conditions. Within 12 months from the date of allotment right of possession is established, the title commencing from the date of confirmation thereof. Five years' residence is necessary. Boundary fences must be completed within 3 years from the date of confirmation. The capital value as notified is repayable by annual instalments, usually of 6 per cent. thereof, including interest at 5 per cent. Under certain circumstances the Minister may postpone the payment of the first two annual instalments. The third instalment may be similarly suspended, provided that improvements of a value equal to the amount of the three instalments have been effected. On payment of all moneys due, and fulfilment of all conditions, a freehold title is given.

(iv) *Progress of Soldier Settlement*. At the 30th June, 1924, the area acquired or set apart exclusively for soldiers was 9,010,860 acres, of which 1,843,869 acres comprised private land. The number of soldiers allotted farms was 8,819 of whom 1,747 subsequently transferred, forfeited, or surrendered their holdings. The area of the farms held at that date was 8,134,009 acres, of which 6,360,325 acres were Crown lands (including 3,832,930 acres in the Western Division taken up under the Western Lands Act), 1,711,504 acres of acquired lands, and 62,180 acres in the Irrigation Areas.

2. **Victoria**.—(i) *General*. Returned soldiers may take up land under the conditions contained in the Land Act and Closer Settlement Act. The Governor may also set apart any area of Crown land for disposal under those Acts to discharged soldiers only, or subdivide the same into blocks, which may be granted to them on special terms. The Closer Settlement Board is empowered to improve land (a) prior to its disposal in allotments; or (b) at any time within the first 3 years after it has been disposed of under conditional purchase lease; or (c) at any time prior to its being resold after forfeiture to the Crown. The cost of the improvements is, in the case of (b) to be repaid in 40 half-yearly instalments, and in the cases of (a) and (c) it may be added to the value of the allotments, or treated as an advance.

(ii) *Progress of Soldier Settlement*. At the 30th June, 1924, the area acquired or set apart for soldier settlement was 2,272,350 acres, of which 1,744,111 acres comprised private land purchased at a cost of £13,214,902. The number of farms allotted was 8,640, containing 2,290,489 acres.

3. *Queensland.*—(i) *Acquisition of Land.* The Minister may, with the approval of the Governor in Council, acquire for the Crown, either by agreement or compulsorily, country, town or suburban land in Queensland, whether alienated in fee-simple or held from the Crown under any tenancy or tenure. The purchase-money may be paid, at the option of the Minister, in cash, or in debentures bearing interest at $4\frac{1}{2}$ per cent. per annum, which are not negotiable for 5 years. Crown land may also be set apart as open for selection as perpetual lease selections by discharged soldiers only.

(ii) *Perpetual Lease Selections.* (a) Where the land is unoccupied Crown land or has been acquired under the Discharged Soldiers Settlement Act as the whole or part of a holding held under pastoral lease or grazing selection tenure or scrub selection, or not acquired under the Closer Settlement Act, the following provisions apply :—1. No deposit of rent or survey fee is necessary. 2. During the first 3 years, the rent is a peppercorn, if demanded. 3. After the first 3 years, the survey fee must be paid in 10 annual instalments. 4. From the fourth to the fifteenth year, the annual rent is $1\frac{1}{2}$ per cent. of the notified capital value, and thereafter $1\frac{1}{2}$ per cent. of the unimproved capital value, as determined by the Land Court every 15 years. 5. The lease is subject to the condition of personal residence during the whole term.

(b) Where the land has been acquired under the Closer Settlement Act or under the Discharged Soldiers Settlement Act, not being the whole or part of a holding held under pastoral lease or grazing selection tenure or scrub selection, the terms are the same, except :—1. The survey fee is payable in instalments after 5 years. 2. The annual rent during the first 15 years is 3 per cent. of the notified capital value, together with the rate per cent. of the sum, if any, paid by the Crown for clearing, and for every term of 15 years thereafter, 3 per cent. of the unimproved capital value, as determined by the Land Court, together with 3 per cent. of the sum, if any, paid by the Crown for clearing.

(iii) *Perpetual Town and Suburban Leases.* These leases are not offered at auction, but are open to applicants in the same manner as perpetual lease selections. The conditions of tenure and rental are the same as those for perpetual lease selections by discharged soldiers.

(iv) *Progress of Soldier Settlement.* At the 30th June, 1924, the area acquired or set apart for soldier settlement was 740,824 acres, of which 41,101 acres comprised private land, purchased at a cost of £270,480. The number of farms allotted was 2,000, containing 705,565 acres.

4. *South Australia.*—(i) *Acquisition of Land.* The Minister for Repatriation may acquire by purchase, either by agreement or compulsorily, land which is held in fee-simple or under Crown lease, for the purpose of the settlement of discharged soldiers thereon. He may also purchase land under any tenure with the view to the settlement thereon of any particular discharged soldier. The Governor may also set apart any area of Crown lands for allotment to discharged soldiers only.

(ii) *Disposal of Land.* Any land set apart or purchased for discharged soldiers may be subdivided into suitable blocks, and offered to them on agreements to purchase or perpetual lease or on leases for such terms of years as the Minister thinks convenient. The Minister may remit, wholly or in part, any instalment of purchase money or rent payable by a discharged soldier upon any agreement or lease granted.

(iii) *Progress of Soldier Settlement.* At the 30th June, 1924, the area acquired or set apart for soldier settlement was 2,790,077 acres, of which 2,106,937 acres comprised private land purchased at a cost of £4,302,942. The number of farms allotted was 3,249, containing 2,779,078 acres.

5. *Western Australia.*—(i) *Acquisition of Land.* Under the Agricultural Lands Purchase Act the Governor may compulsorily acquire land held in fee-simple, provided that the value thereof exceeds £5,000, exclusive of improvements, for the purpose of settling discharged soldiers thereon. The Minister may also purchase any alienated land, including land held under pastoral lease or conditional purchase, which a discharged soldier may desire to acquire.

(ii) *Disposal of Land.* The Governor may set apart any areas of land for the purpose of disposal to discharged soldiers exclusively, under the Land Act or under a special form of tenure. When land has been taken up under the Agricultural Lands Purchase Act, the payment of instalments may be spread over 40 years, and the rate of interest may be reduced during the first 5 years, while payments may also be deferred for the same period. The payment of rent on a pastoral lease granted to or acquired by a discharged soldier may be remitted for the first 5 years, provided that the area thereof does not exceed 100,000 acres.

(iii) *Special Tenure.* A discharged soldier who has obtained a qualification certificate may apply for a block of land in an area set apart for discharged soldiers, on the terms either of the Land Act or of the Agricultural Lands Purchase Act, but with the following modifications:—The Minister may allow payment of the instalments of the price of the land, including the value of improvements, to commence not later than 5 years from the commencement of the conditional purchase; and the price, as fixed by the Land Act (exclusive of the value of the improvements, if any, and survey fee), of Crown lands acquired by a discharged soldier is reduced by one half, and any soldier who, prior to enlisting, was a holder of a conditional purchase under the Land Act, is not required to pay more than half the purchase money. This latter provision does not apply to land acquired by the Crown under the Agricultural Lands Purchase Act.

(iv) *Areas Acquired and Allotted.* At the 30th June, 1924, the area of land acquired or set apart for soldier settlement was 9,094,711 acres, of which 253,478 acres comprised private land purchased at a cost of £607,215. The number of farms allotted was 1,095, containing 9,094,711 acres. In addition, 3,170 properties with an area of 25,353,775 acres were purchased by returned soldiers with the assistance of the Agricultural Bank, which then takes a mortgage to cover its expenditure. Assistance was also given to 859 soldier settlers who occupied areas totalling 2,789,200 acres.

6. *Tasmania.*—(i) *Acquisition of Land.* The Minister may purchase by agreement and acquire or compulsorily acquire for the Crown private land for the purpose of settling returned soldiers thereon in the same manner as under the Closer Settlement Act, with the exception that the minimum value of land which may be compulsorily acquired is reduced to £6,000. Up to £2,850,000 may be borrowed for the purposes of soldier settlement.

(ii) *Free Grants to Returned Soldiers.* Any discharged soldier to whom a qualification certificate has been issued may select under the Crown Lands Act one lot of first-class land (maximum value £1 per acre) not exceeding 100 acres in area, or its equivalent in value of second or third class land. The land is free, but the conditions as to occupation and improvements in the Crown Lands Act must be complied with, and the occupation must be effected by the returned soldier or by a member of his family.

(iii) *Ordinary Tenure by Returned Soldiers.* The Governor may set apart areas of Crown lands or closer settlement land for disposal under the Crown Lands Act or the Closer Settlement Act to discharged soldiers exclusively, and may modify the provisions of those Acts under which the land is taken up.

(iv) *Special Tenure for Returned Soldiers.* Land acquired under the Returned Soldiers Settlement Act may be disposed of by way of sale or lease to discharged soldiers, as well as any land which the Governor may have set apart for the same purpose. This land is subdivided into such allotments and disposed of at such prices capital values or rents and subject to such conditions as the President of the Closer Settlement Board determines. No deposit is required from an applicant, and where the land is disposed of by way of lease or sale no rates or taxes need be paid for the first 4 years.

(v) *Areas Acquired and Allotted.* At the 30th June, 1924, the area acquired or set apart for soldier settlement was 329,582 acres, of which 268,209 acres comprised private land purchased at a cost of £2,010,225. The number of farms allotted was 1,935, containing 271,537 acres.

7. **Summary.**—The following table gives a summary of the area acquired, the purchase price thereof, and the number and area of farms allotted in all the States to the 30th June, 1924 :—

**SOLDIER SETTLEMENT.—AREAS ACQUIRED AND ALLOTTED AT
30th JUNE, 1924.**

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
Area acquired or set apart—							
(i) Private land acquired .. acres	1,843,869	1,744,111	41,101	2,106,937	253,478	268,209	6,257,705
(ii) Crown lands set apart ..	7,166,991	528,239	699,723	693,140	8,841,233	61,373	17,990,699
Farms, etc., allotted { No. 6,448	8,134,009	8,640	2,000	3,249	1,095	1,935	23,367
Price paid by Government for private land acquired .. £	8,050,002	13,214,902	270,480	4,302,942	607,215	2,010,225	28,465,766

§ 9. Tenure of Land by Aliens.

1. **New South Wales.**—(i) *General.* In the Crown Lands and Closer Settlement Acts restrictions are placed on the acquisition of Crown lands by aliens, but in the Mining Act there is no mention of any such restriction.

(ii) *Crown Lands Act.* An alien is not qualified to apply for an original homestead selection, an original purchase lease, a settlement lease, or an original conditional purchase, unless he has resided in New South Wales for one year and at the time of making application lodges a declaration of his intention to become naturalized within 5 years. If he fails to become naturalized, the land is forfeited. The residential limit of 12 months does not, however, apply to applicants for homestead farms, Crown leases, suburban holdings, or leases within irrigation areas; but any alien who becomes the holder of any of these tenures must become naturalized within 3 years. Failure to comply with this regulation involves forfeiture of the holding together with all improvements thereon.

(iii) *Closer Settlement Act.* No person, other than a natural-born subject or a naturalized subject of His Majesty, or, if the subject of a neutral power who has served with the military or naval forces of His Majesty in the war of 1914–1919, is qualified to apply for a settlement purchase, but an unnaturalized subject of such allied power is qualified if he has resided in New South Wales for one year and lodges a declaration of his intention to become naturalized within 2 years. If such person fails to become naturalized the land is forfeited.

2. **Victoria.**—(i) *General.* No restrictions are placed on the holding of land by aliens in either the Land Act or in the Closer Settlement Act. Under the Supreme Court Act (Section 58) every alien friend resident in Victoria may acquire and hold real and personal property in the same manner as if he were a natural-born subject of His Majesty.

3. **Queensland.**—(i) *Land Act.* No alien, who has not first obtained a certificate that he is able to read and write from dictation words in such language as the Minister may direct, is competent to apply for or hold any selection. If an alien acquires a selection or any interest therein, and does not within 5 years become naturalized, all his interest in such selection is forfeited. If, however, an alien has made application to become a naturalized subject before the expiration of 5 years, and his application has, under any law, not been dealt with, such period shall be extended by a further 5 years.

(ii) *Mining Act.* No Asiatic, African, or Polynesian alien may exercise any privilege under a miner's right, except that of alluvial gold mining, nor may he hold any lease or business licence.

(iii) *Leases to Aliens Restriction Act.* Under the Leases to Aliens Restriction Act of 1912, no lease may be granted of any parcel of land exceeding 5 acres in extent to any alien who has not first obtained a certificate that he is able to read and write from dictation in such language as the Secretary for Public Lands may direct.

4. *South Australia.*—(i) *General.* The only reference to the tenure of lands by aliens is in the Irrigation Act, which prescribes that persons of any Asiatic race, who are not subjects of His Majesty, are disqualified from being lessees.

5. *Western Australia.*—(i) *General.* There is no restriction in the Land Act forbidding the holding of land by aliens, but the regulations for the granting of leases of town and suburban lands prescribe that no lease shall be applied for or acquired by an Asiatic or African alien, except those open for cultivation situated northward of latitude 25 degrees south.

(ii) *Mining Act.* Under the Mining Act a miner's right may not be issued to any Asiatic or African alien, nor to any person of Asiatic or African race claiming to be a British subject, without the authority of the Minister. An Asiatic or African alien cannot hold a mining lease.

6. *Tasmania.*—(i) *Aliens Act.* Under the Aliens Act of 1913, real and personal property of every description may be taken, acquired, held, and disposed of by an alien in the same manner in all respects as by a natural-born British subject.

7. *Northern Territory.*—(i) *Crown Lands Ordinance.* A lease may be granted to any person over 18 years of age.

(ii) *Northern Territory Mining Act.* A miner's right held by an Asiatic alien entitles him to mine only for gold or tin on alluvial ground, while under the Northern Territory Mining Act, and the Tin Dredging Ordinance, no mining lease may be granted to an Asiatic alien, and no such alien is entitled to acquire or hold any lease or any interest therein.

(iii) *Mineral Oil and Coal Ordinance.* No licence or lease shall be granted to (a) any company other than a British Company registered under the provisions of the law relating to companies in force in the Northern Territory; (b) any company, unless two-thirds at least of its shares are held by natural-born or naturalized British subjects; or (c) to any person who is not a British subject.

§ 10. Advances to Settlers.

1. *New South Wales.*—(i) *General.* Advances to ordinary settlers are effected through the Rural Bank Department of the Government Savings Bank, and may consist of either (a) overdrafts on current accounts; (b) fixed or amortization loans upon mortgage of an estate in fee-simple or upon any tenure or holding under the Crown Lands Act; or (c) advances on purchase of farms. Advances to soldier settlers are made under the Returned Soldiers Settlement Act.

(ii) *Government Savings Bank Act.* (a) *Loans to Settlers.* The following provisions apply to fixed or amortization loans:—(1) no loan may be for a less amount than £50, nor for more than £2,000 to any person; (2) no loan may be made in respect to encumbered land, unless it is used to pay off such encumbrance; (3) the amount of any loan must not exceed two-thirds of the sale value of the security; (4) in the case of holdings under the Crown Lands Act (other than Western Lands leases and homestead leases) in respect of which a certificate of fulfilment of conditions has not issued, or which have not a currency of 5 years, a loan not exceeding £500 and not exceeding the value of the improvements may be made with the guarantee of the Minister for Lands, and (5) in the case of Western Lands leases and homestead leases the loan must not exceed 50 per cent. of the sale value of the security. The interest is fixed by the Commissioners of the Savings Bank, and loans are repayable either (1) in half-yearly instalments of interest and principal extending over 31 years, or (2) at fixed dates.

(b) *Advances on Purchase of Farms.* The Commissioners may make advances to assist persons in purchasing lands, provided that the title is either certificated conditional purchase or freehold. The amount of the advance must not exceed 80 per cent. of the

Commissioners' valuation of the security, and in other respects these advances are subject to the same provisions as other loans from the Rural Bank Department, but are limited to a maximum of £1,250 in each case.

(iii) *Returned Soldiers Settlement Act.* Advances may be made up to £625 to returned soldiers for the following purposes:—(a) clearing, fencing, draining, water supply, and general improvement of the land; (b) purchases of implements, stock, and other necessary commodities; and (c) the erection of buildings. The terms of repayment are usually (a) house, water supply, fencing, and other permanent improvements, by repayments extended over 25 years (the first 5 years' interest only to be paid); and (b) tools, stock, and implements, by payments extended over 6 years (interest only to be paid at the end of the first year). Interest is fixed at not exceeding $3\frac{1}{2}$ per cent. for the first year, 4 per cent. for the second year, and so on, the rate increasing by not more than one-half per cent. for each subsequent year, until the maximum rate of $6\frac{1}{2}$ per cent. has been reached.

(iv) *Amount of Advances.* The following table gives particulars respecting advances, etc., to 30th June, 1924:—

ADVANCES TO SETTLERS.—NEW SOUTH WALES, 1923–24.

Particulars.	Advances made during 1923–24.	Total Advances at 30th June, 1924.	Amount outstanding at 30th June, 1924.
	£	£	£
Government Savings Bank Advances ..	1,969,814	12,040,600	7,671,077
Soldier Settlement Advances ..	148,804	2,851,797	2,394,282
Advances for Purchase of Wire Netting ..	92,252	650,129	234,500
Advances to Necessitous Farmers ..	170,838	1,992,910	577,814
Total	2,381,708	17,535,436	10,877,673

2. *Victoria.*—(i) *General.* The principal institution which advances money to settlers is the State Savings Bank. The Closer Settlement Board is also authorized to make such advances, and the Government may lend money to Cool Stores Trusts, and, under special drought circumstances make advances to settlers for the purchase of seed, cattle, etc., for which purpose separate Acts have been and are passed from time to time as required.

(ii) *State Savings Bank Act.* The *Crédit Foncier* Department of the State Savings Bank was created for the purpose of making advances to settlers and others, and is authorized to borrow up to £10,000,000 for that object. The Commissioners may lend money to farmers, etc., on the security of any agricultural, horticultural, viticultural, or pastoral land held in fee-simple or on conditional purchase. Such loans are secured by a first mortgage on the property, and are payable either in cash or by debentures or mortgage bonds, at the option of the Commissioners. No advance may be less than £50, or more than £2,000, and each advance is limited to two-thirds, or, in the case of returned soldiers, to three-quarters, of the value of the land, and, in the case of a conditional purchase, this amount is reduced by the amount of rent outstanding. Where improvements are effected on a conditional purchase lease to the amount of £1 per acre at least, and the value of the land and improvements exceeds £2 per acre, an additional advance, not exceeding 15s. per acre, may be made. In the case of land which has acquired a special increase of value by reason of being cultivated as vineyards, hop-grounds, orchards, etc., advances may be made on the following terms:—(a) the total amount which may at any time be advanced must not exceed £100,000; (b) the amount of allowable advance may be increased by one-fourth, but not to a greater amount than £30 per acre; and (c) no advance may be made for a longer period than 15 years. Repayment of advances must be made in 63 half-yearly instalments of principal and interest, a slight reduction in the amount being made in the case of returned soldiers. The Commissioners may also advance money to companies in country districts for the erection of works for freezing, packing, or storing any commodities which are included in

the Primary Products Act or in the Fruit Act, provided that shares equal in value to not less than two-thirds of the proposed expenditure have been taken up, and one-third thereof paid for in cash. The loan is granted upon such terms and conditions as the Commissioners may think fit.

(iii) *Closer Settlement Act.* The Closer Settlement Board may advance money to (a) lessees of workmen's homes and agricultural labourers' allotments in aid of the cost of fencing and erecting dwelling-houses; (b) lessees of Crown land for carrying on farming or grazing pursuits, or for adding to improvements; (c) municipalities, for making roads to any land acquired by the Board; and (d) owners of land for the purchase of wire netting. An advance may not exceed £625, or, in the case of land which is suitable mainly for grazing, £1,000, and is repayable in 40 half-yearly instalments, with 5 per cent. interest. Where a lessee has, after not less than 6 years, obtained his compliance certificate or Crown grant, the amount of loan may be increased to £1,000, but must not exceed 60 per cent. of the value of the improvements and amount of purchase-money paid.

(iv) *Discharged Soldiers' Settlement Act.* The Closer Settlement Board may advance to a discharged soldier up to £625, or, if he is the owner or lessee of land in the mallee country or of grazing land only, up to £1,000. The rate of interest is fixed by the Minister, and is 3½ per cent. for the first year, increasing by ½ per cent. annually until the rate determined is reached. Repayment is as prescribed.

(v) *Primary Products Advances Act.* A company registered under the Companies Act, or a society registered under the Provident Societies Act, which is undertaking the establishment of abattoirs and freezing works, or cool storage for fish, or dried or canned fruit, or jam factories, tobacco-curing, or fruit-works, may be granted by the State Savings Bank a loan for the purpose of constructing such works. No loan may be granted unless at least one-third in number and value of the shareholders are persons engaged in the production of the primary products supplied to the company and full particulars of the proposed undertaking are furnished. The loan is repayable at such times and with such interest as the Commissioners may determine, the property must be mortgaged to the Bank, and a sum, not exceeding 5 per cent. of the value of the buildings, etc., paid annually into a depreciation fund.

(vi) *Fruit Act.* A Cool Stores Trust may be granted a loan by the Treasurer for the purchase of land and for the erection of a cool store thereon. Such loan must be a first charge on the property and revenue of the Trust, be for an agreed term of years, and provide for repayment with interest at 4½ per cent. in 40 half-yearly instalments. The State Savings Bank Commissioners may also advance money to a company for the purpose of constructing fruit-works, provided that at least one-third in number and value of the shares are held *bona fide* by shareholders being owners or occupiers of orchards within the locality. The terms of the loan are the same as those under the Primary Products Advances Act.

(vii) *Amount of Advances.* The following table gives particulars respecting advances etc., to 30th June, 1924:—

ADVANCES TO SETTLERS.—VICTORIA, 1923–24.

Authority Making Advances.	Advances made to—	Advances made during 1923–24.	Total Advances at 30th June, 1924.	Amount Outstanding at 30th June, 1924.
		£	£	£
State Savings Bank	Civilians	335,385	5,788,725	2,465,150
	Discharged soldiers ..	42,185	260,170	224,898
Closer Settlement Board	Closer Settlement settlers ..	1,123,447	6,742,088	4,624,984
	Soldier settlers ..	1,126,907	20,504,376	18,397,676
Treasurer	Cool stores, canneries, etc.	..	591,994	477,587
Total .. ..	.. ..	2,627,924	33,887,353	26,190,295

3. *Queensland.*—(i) *General.* Advances to settlers are made under the State Advances Act (formerly the Government Savings Bank Act), the Discharged Soldiers' Settlement Act, the Co-operative Agricultural Production Act, and the Agricultural Bank Act 1923.

(ii) *State Advances Act.* The State Advances Corporation, which took the place of the Government Savings Bank, may make advances to any owner or occupier of property which is used for agricultural, dairying, grazing, horticultural or viticultural purposes, on the security of a first mortgage. The limit of advance to one person is £1,200, and, subject to the succeeding paragraphs, no advance may exceed 15s. in the £1 of the fair estimated value of the holding and existing or proposed improvements. The purposes for which loans are granted are :—(a) to pay the purchase-money of the holding ; (b) to release a mortgage or other liability on the holding ; (c) to purchase stock, machinery, and implements ; (d) to effect suitable improvements ; and (e) for general purposes (including a maximum amount of £400 for unspecified purposes to *bona fide* resident settlers). Advances may also be made, not exceeding in the aggregate £300, to the full value of the following improvements :—(a) buildings ; (b) ringbarking, clearing, fencing, draining, and water conservation ; and (c) wells or bores (inclusive of lifting power). Where a holder of agricultural land has an area of 35 or more acres cleared, fenced, and sown with approved grass, an amount up to £100 may be advanced for the purchase of dairy stock to the full value of such improvements. Further security may be required by way of stock-mortgage, bill of sale, lien on crops, etc. During the first 5 years following the date of the loan, interest is payable at the rate of 5 per cent per annum. After the expiration of that period, the loan with interest is repayable within 20 years in half-yearly instalments of £4 0s. 3d. (which includes interest) for every £100 advanced. Advances made on the security of leases of grazing selections must be repaid with interest at 5 per cent. per annum, within a term not later than the date upon which the lease will expire.

(iii) *Discharged Soldiers' Settlement Act.* Advances may be made by the Minister to discharged soldiers who are owners of land in fee-simple or holders of land under tenure from the Crown. Such advances may be made for the purposes of (a) the payment of purchase-money ; (b) the payment of existing liabilities ; (c) making improvements ; (d) purchasing live stock, machinery, trees, etc. ; or (e) any other approved purpose. An advance to any one person may not exceed £1,200. The first portion of the advance, which must not exceed £625, nor the fair value of the holding and improvements, is repayable with interest by instalments within 40 years. The rate of interest for the first year is 3½ per cent., and it increases annually by ½ per cent. until the rate equals the actual rate (not exceeding 5 per cent.) payable by the State in respect of the loan out of which such advance was made. The balance of the loan, up to £575, may be advanced for a term of 25 years, repayable with interest at 5 per cent., but must not exceed 15s. in the £1 of the estimated value of the land and improvements. Advances may be also made on short terms for the purchase of live stock, plants, vehicles, implements, seeds, etc.

(iv) *Co-operative Agricultural Production Act.* The Minister may make advances to any co-operative company for the construction of works for the manufacture and storage of primary products of agriculture. Such advances may be made up to two-thirds of the entire cost of the works and machinery. An advance may be granted only on the condition that the articles of association of the company provide that at least two-thirds of the shares are held by primary producers, and that no greater dividend than 6 per cent. shall be paid before any advance has been repaid. The Minister takes as security a mortgage over the works, together with any available collateral security, such as a bill of sale over the machinery, etc. The repayments are spread over a period of 16 years, with interest at 5 per cent. per annum. For the first 2 years interest only is payable, and for the remaining 14 years the sum of £10 2s. 1d. must be repaid annually for every £100 advanced.

Advances may also be made to farmers, dairy farmers, or sheep farmers, for the following purposes and on the following terms :—(a) purchase of dairy cattle, £200, term seven years ; (b) purchase of pigs, £50, term three years ; (c) purchase of sheep, £200, term 2 years ; and (d) erection of silos, £150, term 5 years. The advances for the purchase of dairy cattle, pigs, and sheep, may be made on the security of a stock mortgage only, but advances for the erection of silos must be secured by a mortgage over the property.

(v) *Agricultural Bank Act*. This Act, which was assented to on the 23rd November, 1923, consolidates and liberalizes the provisions of the existing legislation relating to advances to settlers. The Act was proclaimed in force as from the 1st November, 1924.

(vi) *Amount of Advances*. The following table gives particulars of advances, etc., to 30th June, 1924 :—

ADVANCES TO SETTLERS.—QUEENSLAND, 1923-24.

Act under which Advances were made.	Advances made during Year 1923-24.	Total Advances made to 30th June, 1924.	Amount Outstanding at 30th June, 1924.
	£	£	£
State Advances Act	309,438	3,557,012	2,108,567
Co-operative Agricultural Production and Advances to Farmers Acts	6,492	50,910	39,600
Discharged Soldiers' Settlement Act—			
Soldiers' Group Settlements	57,151	2,934,054	2,596,835
State Advances Corporation	33,918	1,032,634	876,303
Total	406,999	7,574,610	5,621,305

4. *South Australia*.—(i) *General*. Advances may be made to settlers and others for the purpose of discharging mortgages, making improvements, etc., under the provisions of several Acts, which are briefly summarized hereunder. Loans may be made under the Loans for Fencing Act and the Vermin Act for the purchase of fencing materials in vermin-infested districts,

(ii) *Crown Lands Act*. Advances may be made to homestead blockholders (a) for erecting buildings ; or (b) for making improvements on their land. A loan must not exceed in the case of (a) the cost of existing improvements ; and in the case of (b) one-half the value of the improvements to be effected ; and in no case may a loan exceed £50. Repayment is to be made in 20 equal annual instalments at the rate of £7 7s. 2d. per cent. of the amount advanced.

(iii) *Advances to Settlers on Crown Lands Act*. The Advances to Settlers Board may make advances to any settler on the security of his land and improvements (a) for making improvements, up to the estimated value of his lease or agreement and improvements, not exceeding £400, and up to three-fourths of such value in excess of £400, but not exceeding £250 ; or (b) for stocking his holding, up to £200 ; or (c) for discharging an existing mortgage, up to three-fourths of the value of his lease or agreement and improvements ; or (d) for any other purpose, up to the same amount. Repayment must be made by 70 equal half-yearly instalments, with interest, but for the first 5 years interest only is payable.

(iv) *State Advances Act*. Under this Act the State Bank of South Australia was established, with power to make advances to farmers and other producers, to local authorities, to persons possessed of the necessary securities, and in aid of industries. Loans to farmers and other producers and in aid of industries are made upon the security of lands in fee-simple or of Crown leases, and, in the case of freehold land, must not exceed three-fifths of the unimproved value in fee-simple of the land and permanent improvements, or, if the land has acquired a special additional value by reason of cultivation as a vineyard or orchard, then plus one-third of such additional value, or, in the case of a Crown lease, one-half of the selling value thereof with improvements. No single advance

may exceed £5,000. The Bank and the borrower may agree upon the term of years, not exceeding 42, over which repayment may be spread, as well as the interest to be paid.

(v) *Irrigation Act.* Settlers under this Act are entitled to loans under the Advances to Settlers on Crown Lands Act, as well as under the Irrigation Act, but not exceeding £600 under both Acts. The Irrigation Commission may make advances to lessees (a) not exceeding the value of the lease and improvements thereon, for clearing, fencing, etc., for constructing channels and drains, or for the erection of buildings; (b) up to £200 for the purchase of implements, stock, etc.; and (c) not exceeding three-fourths of the aggregate value of the lease and improvements, for the discharge of a mortgage, or any other purpose. The Commission may also, upon the application of the lessee, expend a sum not exceeding £30 per acre of the irrigable land in each block in fencing, clearing, grading, and constructing channels, drains and tanks; 15 per cent. of the estimated cost to be lodged with the application. The maximum sum which may be advanced with respect to any one piece of land within an irrigation area is £600, or £30 per acre of the irrigable portion, whichever is the greater. Advances may be made only on the security of a first mortgage. During the first 5 years interest only is payable, but thereafter the advance must be repaid in 70 equal half-yearly instalments, with interest.

(vi) *Loans to Producers Act.* The Minister may, on the security of a mortgage on the property, make loans to any registered co-operative society three-fourths of the members of which are engaged in or are about to be engaged in rural production, for any of the following purposes:—Class A (1) the erection or purchase of cool stores; or (2) the erection or purchase of factories for jam making, and for canning, drying, and otherwise preserving fruit or vegetables; or (3) the erection or purchase of fruit-packing sheds; or (4) the erection or purchase of butter, cheese, or bacon factories; or (5) the erection or purchase of wineries or distilleries; or (6) the erection of silos; Class B (1) the purchase of fruit-grading machinery; or (2) the installation of irrigation plants; or (3) any other prescribed purpose. Loans may also be made to any land-holder for any of the three last-named purposes. Repayment of loans, with interest, must be in equal half-yearly instalments, spread over a period of 20 years, under Class A, and of 7 years under Class B. Under Class A, interest only is payable for the first 2 years of the currency of the loan, the repayment by 36 half-yearly instalments of principal and interest commencing on the first day of the thirty-first month from the making of the loan. Under Class B, repayment of both principal and interest commences on the first day of the seventh month from the date of making the loan.

(vii) *Discharged Soldiers Settlement Act.* An advance may be made to any discharged soldier settler for (a) clearing, fencing, etc.; (b) the erection of buildings on the land; (c) the purchase of implements, stock, etc.; (d) the payment of rent in arrear; (e) the discharge of any encumbrance or mortgage on the land; (f) paying off any debt incurred prior to enlistment or during his absence on active service. The last three purposes apply only to holders of certain classes of tenure. Repayment may be made in the cases of (c) and (f) in 7 yearly or 14 half-yearly instalments; or, in the cases of (a), (b), or (e), in 40 yearly or 80 half-yearly instalments; or, in the case of (d), as the Minister determines. The rate of interest is fixed by the Minister, but no interest is payable for the first year, 2½ per cent. for the second, 3½ per cent. for the third, and 5 per cent. for the fourth year.

(viii) *Agricultural Graduates Land Settlement Act.* Under the provisions of this Act, the Minister may (a) purchase land with a view to the settlement thereon of agricultural graduates, the value of which land, with improvements, must not exceed £3,000 for each graduate, and is repayable with interest; (b) advance to any agricultural graduate settler up to £500 for the purpose of purchasing seeds, implements, stock, etc., such advance being repayable as follows:—During the first 3 years interest only is payable, and thereafter the whole is to be repaid in 12 equal half-yearly instalments; (c) in uncleared mallee country make advances up to £1,000, but not to exceed £1 for £1 in value of the improvements effected.

(ix) *Amount of Advances.* The following table gives particulars respecting advances etc., to 30th June, 1924 :—

ADVANCES TO SETTLERS.—SOUTH AUSTRALIA, 30th JUNE, 1924.

Particulars.	Advances made during 1923-24.	Total Advances at 30th June, 1924.	Amount outstanding at 30th June, 1924.
	£	£	£
Department of Lands and Surveys—			
Advances to soldier settlers	311,167	5,254,814	4,793,043
Advances to settlers for improvements ..	21,199	618,132	391,648
Advances under Vermin and Fencing Acts ..	52,846	850,963	254,443
Advances to blockholders .. ..	..	41,451	458
Advances for sheds and tanks	7,372	69,534	55,461
Advances in drought-affected areas	1,087	765,368	55,259
Advances under Loans to Producers Act ..	21,765	55,160	54,752
Advances under Closer Settlement Acts ..	22,435	2,233,748	1,633,061
State Bank of South Australia	1,319,408	12,665,916	7,222,074
Irrigation Commission—			
Civilians	57,908	151,246	102,163
Soldier settlers	448,889	1,476,326	1,440,085
Total	2,264,076	24,182,658	16,002,447

5. *Western Australia.*—(i) *General.* Advances to settlers are made by the Agricultural Bank, which was established in 1895. Special advances are also made to returned soldiers.

(ii) *Agricultural Bank.* This bank makes advances to a limit of £2,000 on the security of a first mortgage to persons engaged in agricultural pursuits. The borrower must pay the interest on the amount advanced for the first 5 years, and after the expiration of that term the advance with interest must be repaid within 25 years in half-yearly instalments. The interest is at such rates as may be prescribed, but if over 5 per cent. per annum, must not exceed by more than 1 per cent. the rate of interest paid by the bank on funds raised by the bank.

(iii) *Advances to Soldier Settlers.* A soldier settler may be granted an advance up to £625 for improvements, fertilizers, machinery, plant, &c., and the interest thereon must not exceed 3½ per cent. for the first year, such interest increasing each year by ½ per cent. until the rate reaches the current rate for the time being.

(iv) *Amount of Advances.* The following table gives particulars respecting advances, etc., to 30th June, 1924 :—

ADVANCES TO SETTLERS.—WESTERN AUSTRALIA, 1923-24.

Particulars.	Year ended—	Advances made during Year 1923-24.	Total Advances at 30th June, 1924.	Amount outstanding at 30th June, 1924.
		£	£	£
Agricultural Bank advances ..	30.6.24	371,144	4,971,366	3,393,305
Soldier settlement advances ..	30.6.24	547,775	4,935,099	4,967,431
Advances to rural industries ..	30.6.24	1,422	22,981	22,274
Advances to assisted settlers ..	31.3.24	1,109,531	8,257,083	1,923,541
Total		2,029,872	18,186,529	10,306,551

6. *Tasmania.*—(i) *General.* Advances to farmers and producers may be made under the State Advances Act to closer settlement settlers under the Closer Settlement Act, to fruit-growers formed into a registered company under the Advances to Fruit-growers Act, and to returned soldiers under the Returned Soldiers Settlement Act.

(ii) *State Advances Act.* The Agricultural Bank of Tasmania, constituted under this Act, is authorized to borrow up to £150,000 on debentures or stock for the purpose of advancing money to farmers and other primary producers who own land in fee-simple or under purchase from the Crown on credit. Advances are secured on first mortgages, and may be made for any of the following purposes:—(a) the payment of existing liabilities; (b) agricultural, dairying, grazing, or horticultural pursuits; (c) making the prescribed improvements on the holding; or (d) adding to improvements already made. No advance may be granted to any one person for less than £25 nor for more than £1,000, nor may an advance exceed (a) one-half of the capital value of land held under purchase on the credit system, less the amount of instalments due; or (b) three-fifths of the capital value of freehold land. The repayment of advances commences after 5 years, and the borrower must repay one-fiftieth of the principal sum half-yearly thereafter until the whole amount of the advance is repaid. Interest is payable half-yearly at the rate fixed by the Treasurer.

(iii) *Closer Settlement Act.* Under this Act the Minister may make advances to lessees in aid of the cost of fencing, draining, erecting buildings, and other improvements. The total amount advanced may not exceed £ for £ of the sum expended by the lessee in such improvements. Loans are repayable by equal half-yearly instalments with interest, not exceeding 7 per cent., extending over a period not exceeding 21 years.

(iv) *Advances to Fruit-Growers Act.* The Minister may advance to registered companies on a first mortgage on freehold land or on a lien on other property, money for all or any of the following purposes:—(a) the purchase of land on which a packing shed or pulping works is or are to be erected; (b) the erection of packing sheds; (c) the erection of pulping works; (d) the purchase of pulping works; or (e) the purchase of fruit-grading machinery. Generally, the amount of advance must not exceed 75 per cent. of the value of the land or plant, but, in the case of a company desiring to purchase grading machinery, it must not exceed 50 per cent. of the value thereof. Advances are repayable in equal half-yearly instalments of principal and interest combined extending over a period of 10 years, at the rate of £6 14s. 5d. for every £100 borrowed. Any company to which an advance is made may issue debentures for the purpose of securing the repayment of principal and interest.

(v) *Returned Soldiers Settlement Act.* Advances up to £625 may be made to discharged soldiers (a) for clearing, fencing, and general improvement of land disposed of under the Returned Soldiers Settlement Act; (b) for the erection of buildings, not exceeding £450, thereon; or (c) for the purchase of implements, stock, seeds, etc. Repayment must be made at the prescribed times, and in the prescribed manner. The Minister may also remit wholly or in part the payment of rent or of instalments on the purchase-money.

A returned soldier, who has not exercised his option of acquiring a free selection, and who is already a selector of land on credit purchase, is entitled to a remission of his instalments up to £100.

(vi) *Amount of Advances.* The following table gives particulars respecting advances, etc., to 30th June, 1924:—

ADVANCES TO SETTLERS.—TASMANIA, 30th JUNE, 1924.

Authority making Advances.	Advances made to—	Advances made during 1923-24.	Total Advances to 30th June, 1924.	Amount outstanding at 30th June, 1924.
		£	£	£
Agricultural Bank ..	Settlers	10,960	168,170	93,896
Minister for Lands ..	Soldier Settlers ..	26,121	644,074	369,987
„ ..	Closer Settlement ..			
„ ..	Settlers			
„ ..	Fruit Growers ..	..	834	581
Total .. ..	.. ..	37,081	813,078	464,464

7. *Northern Territory.*—(i) *Advances to Settlers Act 1923.* This Act and the Regulations thereunder provide that the Minister for Home and Territories may, out of moneys paid into a Trust Account for the purpose, make advances to the Northern Territory for the purchase of wire netting.

Applications must state the security offered for payment and contain an undertaking that the applicant will execute an agreement—

- (a) to pay to the Minister free of interest the cost of the wire netting, including all freight and handling charges, to the port or railway station nearest to the applicant's holding. The payments must be made by cash or by not more than 20 equal annual instalments extending over a period of not more than 20 years from the 1st day of July of the year in which the advance is made.
- (b) to use the wire netting within 12 months after its receipt by the applicant for the erection of rabbit-proof or dog-proof fences.

An advance cannot be made on unimproved land or on land on which the rent is overdue.

(ii) *Encouragement of Primary Production Ordinance 1924.* Under this Ordinance the Primary Producers Board may, out of moneys voted by Parliament for the purpose, expend such sums as it deems necessary for the purpose of carrying out its powers under this Ordinance, and particularly for the purpose of granting assistance to producers by—

- (a) the hiring or sale to a producer of machinery, implements or plant; (b) the purchase of fencing or other material for the purpose of making improvements on holdings; (c) the provision of rations for limited periods until products are available; (d) the provision of seeds; (e) the provision of fishing nets, and loan of luggers or other boats; (f) the purchase of live stock; (g) advances for the carrying on of any timber industry; (h) advances for any other purposes recommended by the Board and approved by the Administrator. An advance to one person shall not exceed £600.

For the first 5 years following the date on which the advance is made, interest at the rate of 5 per cent. must be paid annually, and at the expiration of that period the amount of the advance, with 5 per cent. interest, must be repaid by 25 equal yearly instalments.

(iii) *Amount of Advances.* During the financial year 1923–24 the sum of £4,207 was advanced, making the total amount advanced to the 30th June, 1924, £6,231. The balance outstanding at that date, including interest, was £6,101.

8. *Summary of Advances.*—The following table gives a summary for each State to the 30th June, 1924:—

ADVANCES TO SETTLERS.—AUSTRALIA, 30th JUNE, 1924.

State.	Advances made during 1923–24.	Total Advances to 30th June, 1924.	Amount Outstanding at 30th June, 1924.
	£	£	£
New South Wales	2,381,708	12,040,600	7,671,077
Victoria	2,627,924	33,887,353	26,190,295
Queensland	406,999	7,574,610	5,621,305
South Australia	2,264,076	24,182,658	16,002,447
Western Australia	2,029,872	18,186,529	10,306,551
Tasmania	37,081	813,078	464,464
Northern Territory	4,207	6,231	6,101
Total	9,751,867	96,691,059	66,262,240

§ 11. Alienation and Occupation of Crown Lands in the Several States.

1. **General.**—The tables given in the previous parts of this chapter show separately the areas alienated, in process of alienation, and occupied under various tenures in the several States. The tables given below show collectively the general condition of the public estate in each State, having regard to (a) the area alienated absolutely, which includes free grants, sales, and conditional purchases for which grants have been issued, the conditions having been complied with; (b) the area in process of alienation, comprising holdings for which the fee-simple has not yet been alienated, but which are in process of sale under systems of deferred payments; (c) the area occupied under all forms of leases and licences; and (d) the area unoccupied, which, ordinarily, includes roads, permanent reserves, forests, etc. In some cases, however, lands which are permanently reserved from alienation are occupied under leases and licences, so that in such cases the areas reserved are comprised in class (c) and not in class (d). Particulars of leases and licences of reserved areas, as distinguished from leases and licences of other lands, are not available. It should be observed that in many cases lands occupied under leases or licences for pastoral purposes are held on short tenures only, and could thus be made available for settlement practically whenever required.

2. **New South Wales.**—At the 30th June, 1924, of the total area of New South Wales, 22.1 per cent. had been alienated absolutely, 10.7 per cent. was in process of alienation, 58.2 per cent. was held under leases and licences, and the remaining 9.0 per cent. was unoccupied.

The following table gives particulars for the five years ending 30th June, 1920, to 1924:—

ALIENATION AND OCCUPATION OF CROWN LANDS.—NEW SOUTH WALES, 1919-20 TO 1923-24.

Particulars.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
	Acres.	Acres.	Acres.	Acres.	Acres.
1. Alienated.					
Granted and sold prior to 1862	7,146,579	7,146,579	7,146,579	7,146,579	7,146,579
Sold by auction and other sales, 1862 to date	14,849,209	15,182,649	15,184,016	15,188,819	14,962,345
Conditionally sold, 1862 to date	18,564,288	19,228,810	19,970,073	20,637,146	21,233,270
Granted under Volunteer Land Regulations, 1867 to-date	172,198	172,198	172,198	172,198	172,198
Granted for public and religious purposes	240,915	241,417	241,742	242,674	244,282
Total	40,973,189	41,971,653	42,714,608	43,387,416	43,758,674
2. In Process of Alienation.					
Conditional purchases	19,365,856	18,672,521	18,437,590	18,200,900	18,122,045
Closer settlement purchases	1,510,568	1,995,225	2,385,411	2,427,826	2,573,115
Soldiers' group purchase	..	..	..	..	410,567
Other forms of sale	..	..	..	..	11,002
Total	20,876,424	20,667,746	20,823,001	20,628,726	21,116,729
3. Held under Leases and Licences.					
Total under Lands Department and Western Land Board	116,543,911	116,142,203	115,450,062	115,391,357	114,916,852
Mineral and auriferous leases and licences (Mines Department)	229,884	268,851	281,503	307,336	299,688
Total	116,773,795	116,411,054	115,731,565	115,698,693	115,216,540
4. Unoccupied	19,413,092	18,986,047	18,767,326	18,321,665	17,944,557

Area of State—198,036,500 acres.

3. *Victoria*.—The total area of the State of Victoria is 56,245,760 acres, of which 44.6 per cent. had been alienated absolutely up to the end of the year 1923; 15.8 per cent. was in process of alienation under deferred payments and Closer Settlement Schemes; 16.5 per cent. was occupied under leases and licences; while 23.1 per cent. was unoccupied.

The following table shows the distribution :—

ALIENATION AND OCCUPATION OF CROWN LANDS.—VICTORIA, 1919 TO 1923.

Particulars.	1919.	1920.	1921.	1922.	1923.
	Acres.	Acres.	Acres.	Acres.	Acres.
1. <i>Alienated</i>	24,605,825	24,793,053	24,903,109	24,947,732	25,000,672
2. <i>In Process of Alienation</i> —					
Exclusive of Mallee, etc. ..	2,022,373	1,937,933	1,933,656	2,021,372	2,101,155
Mallee Lands	6,259,742	6,274,011	6,303,229	6,345,499	6,241,691
Under Closer Settlement Acts ..	514,128	520,003	528,545	542,978	532,274
Village Settlements	15,235	14,155	12,694	995	861
Total	8,811,478	8,746,102	8,778,124	8,910,844	8,875,981
3. <i>Leases and Licences Held</i> —					
Under Lands Department ..	10,944,854	9,991,558	8,940,521	9,237,593	9,220,529
Under Mines Department ..	69,165	48,561	52,892	52,866	52,849
Total	11,014,019	10,040,119	8,993,413	9,290,459	9,273,378
4. <i>Unoccupied Crown Lands</i> ..	11,814,438	12,666,486	13,571,114	13,096,725	13,005,729

Total area of State—56,245,760 acres.

4. *Queensland*.—The total area of this State is 429,120,000 acres, of which, on the 31st December, 1923, 4.0 per cent. was alienated absolutely; 1.7 per cent. was in process of alienation; and 71.7 per cent. was occupied under leases and licences. The remainder (22.6 per cent.) was either unoccupied or held as reserves, or for roads.

The distribution is shown in the following table :—

ALIENATION AND OCCUPATION OF CROWN LANDS.—QUEENSLAND, 1919 TO 1923.

Particulars.	1919.	1920.	1921.	1922.	1923.
	Acres.	Acres.	Acres.	Acres.	Acres.
1. <i>Alienated Absolutely</i> .					
By Purchase	16,806,983	16,935,558	17,064,697	17,156,804	17,255,176
Without Payment	86,736	86,742	87,731	87,740	87,773
Total	16,893,719	17,022,300	17,152,428	17,244,544	17,342,949
2. <i>In Process of Alienation</i> ..	9,064,089	8,659,280	8,280,296	7,833,127	7,358,971
3. <i>Occupied under Leases and Licences</i> .					
Pastoral Leases	211,030,440	209,248,960	201,010,760	185,348,400	180,353,840
Occupation Licences	36,590,960	33,830,400	33,526,240	34,610,680	34,529,120
Grazing Farms and Homesteads ..	76,437,422	79,397,073	78,658,048	78,983,282	79,783,557
Scrub Selections	166,899	112,137	86,289	77,283	72,886
Leases—Special Purposes	210,201	218,563	246,783	258,706	303,853
Under Mines Department	333,834	342,880	422,368	511,137	454,586
Perpetual Lease Selections	2,005,337	2,694,626	3,060,954	3,166,134	3,147,890
Auction Perpetual Leases	7,943	9,135	10,001	11,249	12,558
Total	326,783,036	325,853,774	317,021,443	302,966,871	307,658,290
4. <i>Unoccupied</i>	76,379,156	77,584,646	86,665,833	101,075,458	96,759,790

Total area of State—429,120,000 acres.

5. **South Australia.**—The area of the State of South Australia is 243,244,800 acres, and at the end of the year 1924, 4.6 per cent. was alienated absolutely; 1.4 per cent. in process of alienation; 52.3 per cent. occupied under leases and licences; and 41.7 per cent. unoccupied. The subjoined table shows the distribution :—

**ALIENATION AND OCCUPATION OF CROWN LANDS.—SOUTH AUSTRALIA,
1920 TO 1924.**

Particulars.	1920.	1921.	1922.	1923.	1924.
	Acres.	Acres.	Acres.	Acres.	Acres.
1. <i>Alienated—</i>					
Sold ..	10,801,634	10,882,906	10,936,750	10,987,030	11,104,386
Granted for Public Purposes ..	130,332	131,191	131,741	131,741	132,672
Total	10,931,966	11,014,097	11,068,491	11,118,771	11,237,058
2. <i>In Process of Alienation ..</i>	3,166,524	3,192,633	3,023,556	3,123,674	3,270,884
3. <i>Held under Lease and Licence—</i>					
Right of Purchase Leases ..	2,285,421	2,202,841	2,112,350	2,081,003	2,038,090
Perpetual Leases ..	14,880,001	14,849,184	14,756,565	14,956,020	14,944,537
Pastoral Leases ..	100,904,690	102,832,050	98,760,263	105,981,903	108,796,663
Other Leases and Licences ..	880,420	909,764	886,989	962,985	864,648
Mining Leases and Licences ..	603,298	642,570	512,841	653,899	586,025
Total	119,554,730	121,436,409	117,029,008	124,638,810	127,229,963
4. <i>Area Unoccupied</i>	109,591,580	107,601,661	112,123,745	104,363,545	101,606,895

Total area of State—243,244,800 acres.

6. **Western Australia.**—The total area of Western Australia is 624,588,800 acres, of which, at the 30th June, 1924, 1.7 per cent. was alienated absolutely; 2.9 per cent. was in process of alienation; while 35 per cent. was occupied under leases and licences issued either by the Lands or the Mines Departments. The balance of 60.4 per cent. was unoccupied.

The following table shows the distribution :—

**ALIENATION AND OCCUPATION OF CROWN LANDS.—WESTERN AUSTRALIA,
1919-20 TO 1923-24.**

Particulars.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
	Acres.	Acres.	Acres.	Acres.	Acres.
1. <i>Alienated Absolutely ..</i>	8,763,051	9,197,088	9,724,931	10,051,080	10,520,028
2. <i>In Process of Alienation—</i>					
Midland Railway Concessions ..	54,800	54,800	54,800	54,800	54,800
Free Homestead Farms ..	1,188,438	1,017,255	941,485	961,492	963,700
Conditional Purchases ..	7,571,189	7,544,062	7,615,430	8,028,588	8,187,635
Selections from the late W.A. Company ..	2,193	2,193	2,193	2,193	2,193
Selections under the Agricultural Lands Purchase Act ..	427,465	485,129	539,927	565,780	572,410
Special Occupation Leases and Licences ..	1,298	1,298	1,298	820	820
Homestead or Grazing Leases ..	4,973,656	5,887,426	6,833,393	7,357,291	7,998,598
Poison Land Leases or Licences ..	42,274	42,275	42,275	42,275	42,275
Village Allotments ..	30	29	28	27	13
Working-men's Blocks ..	426	492	342	320	157
Total	14,259,769	15,034,959	16,031,176	17,013,586	17,822,601

ALIENATION AND OCCUPATION OF CROWN LANDS.—WESTERN AUSTRALIA, 1919-20 TO 1923-24—*continued.*

Particulars.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
	Acres.	Acres.	Acres.	Acres.	Acres.
3. Leases and Licences in Force—					
(i) Issued by Lands Department—					
Pastoral Leases ..	253,436,312	254,688,286	263,403,351	258,238,151	214,818,111
Special Leases ..	62,348	57,156	57,509	49,213	40,144
Leases of Reserves ..	2,391,571	1,988,713	2,156,186	2,101,795	2,084,766
Residential Lots ..	285	272	4,422	5,769	171
(ii) Issued by Mines Department—					
Gold Mining Leases ..	20,148	24,540	8,934	8,934	8,101
Mineral Leases ..	41,357	41,843	46,056	47,275	48,214
Miners' Homestead Leases	36,181	36,401	35,828	35,828	33,254
Timber Leases and Concessions ..	625,186	590,314	585,453	585,110	545,334
Timber Permits ..	996,882	1,076,809	1,322,168	1,075,101	1,320,531
Total	257,610,300	258,504,334	267,619,907	262,147,176	218,898,716
4. Area Unoccupied	343,955,680	341,852,419	331,212,786	335,376,958	377,347,455

Total area of State—624,588,800 acres.

7. Tasmania.—Of the total area of Tasmania, at the end of the year 1923, 32.2 per cent. had been alienated absolutely; 4.8 per cent. was in process of alienation; 14.4 per cent. was occupied under leases and licences for either pastoral, agricultural, timber, or mining purposes, or for closer or soldier settlement, or occupied or reserved by the Crown; the remainder (48.6 per cent.) being unoccupied. The following table shows the distribution:—

ALIENATION AND OCCUPATION OF CROWN LANDS.—TASMANIA, 1919 TO 1923.

Particulars.	1919.	1920.	1921.	1922.	1923.
	Acres.	Acres.	Acres.	Acres.	Acres.
1. Alienated Absolutely	5,241,292	5,241,856	5,259,066	5,326,825	5,407,937
2. In Process of Alienation	1,054,111	963,915	920,206	880,410	798,043
3. Leases or Licences—					
(i) Issued by Lands Department—					
Islands	151,000	107,000	108,000	107,000	107,000
Ordinary Leased Land ..	1,341,000	1,540,000	1,608,000	1,577,853	1,593,000
Land Leased for Timber ..	218,784	230,524	236,847	308,072	272,270
Closer Settlement	68,163	68,192	80,435	93,399	93,000
Soldier Settlement	60,223	162,516	219,118	202,673	192,600
Other Leases .. ..	..	1,000	1,000	1,000	1,000
(ii) Issued by Mines Department ..	46,491	46,380	52,476	49,823	42,866
(iii) Occupied by Commonwealth and State Departments	18,000	18,000	18,000	18,000	18,000
(iv) Reserved for Public Purposes ..	100,000	100,000	100,000	100,000	100,000
Total	2,003,661	2,273,612	2,423,876	2,457,620	2,419,736
4. Area Unoccupied	8,478,536	8,298,217	8,174,452	8,112,745	8,151,884

Total area of State—16,777,600 acres.

8. Northern Territory.—At the end of the year 1924 only 0.14 per cent. was alienated absolutely; 41.52 per cent. was held under leases and licences; while the remaining 58.34 per cent. was unoccupied. The following table shows the distribution :—

ALIENATION AND OCCUPATION OF CROWN LANDS.—NORTHERN TERRITORY, 1920 TO 1924.

Particulars.	1920.	1921.	1922.	1923.	1924.
	Acres.	Acres.	Acres.	Acres.	Acres.
1. <i>Alienated</i> —					
Sold	476,508	476,508	476,508	476,508	476,864
Granted for Public Purposes	48	48	48	48	48
Total Alienated	476,556	476,556	476,556	476,556	476,912
2. <i>Leased</i> —					
Right of Purchase	356	356	356	356	..
Pastoral	106,503,680	119,069,760	114,876,000	113,864,720	114,368,266
Other Leases	36,770,115	18,606,537	19,612,170	22,462,896	24,786,688
Total Leases	143,274,151	137,676,653	134,488,526	136,327,972	139,154,954
3. <i>Unoccupied (a)</i>	191,366,093	196,963,591	200,151,718	198,312,272	195,484,934

Total area of Northern Territory—335,116,800 acres.

(a) Including Aboriginal and other Reserves, and Mission Stations.

§ 12. Classification of Alienated Holdings According to Size.

1. *General*.—The classification of holdings according to their area is of interest chiefly in relation to the efforts made by the several States in recent years to promote settlement on the land on blocks of suitable size, especially by means of the Closer Settlement Acts.

The following table gives particulars of the number and areas of holdings of alienated lands and land in process of alienation.

Returns showing such a classification are not available for Queensland and the Northern Territory.

CLASSIFICATION OF HOLDINGS (ONE ACRE AND OVER) IN AREA SERIES.

Size of Holdings.	N.S.W. 1921-22.	Victoria. 1918-19.	S. Aust. 1921-22.	W. Aust. 1923-24.	Tasmania. 1921-22.	Federal Capital Territory. 1921-22.
NUMBER.						
Acres.						
1 to 50	15,177	20,866	7,165	4,785	4,544	3
51 " 100	7,723	8,036	1,825	798	2,523	5
101 " 500	26,429	28,246	6,109	2,898	5,420	26
501 " 1,000	11,069	11,224	4,319	3,266	776	18
1,001 " 5,000	9,778	5,865	4,244	5,654	743	17
5,001 " 10,000	1,090	290	125	325	127	6
10,001 " 20,000	503	117	38	84	60	..
20,001 " 50,000	218	35	15	29	32	1
50,001 and over	72	..	..	5	5	..
Total	72,059	72,679	23,840	17,847	14,230	76
AREA.						
Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1 to 50	340,829	370,426	117,818	63,146	76,500	118.
51 " 100	598,389	572,349	136,948	65,561	174,550	395.
101 " 500	6,917,705	6,517,118	1,725,600	746,133	1,117,720	6,996.
501 " 1,000	7,788,621	7,763,815	3,085,518	2,718,729	535,610	13,382
1,001 " 5,000	19,322,386	10,117,530	7,243,776	11,375,230	1,591,000	31,574
5,001 " 10,000	7,478,508	1,996,606	809,522	2,247,706	893,000	45,344
10,001 " 20,000	6,846,347	1,621,460	510,799	1,173,861	762,700	..
20,001 " 50,000	6,334,766	1,016,847	351,739	759,566	869,000	22,050
50,001 and over	6,371,061	..	..	303,915	385,000	..
Total	61,998,612	29,976,151	13,981,720	19,458,847	6,405,080	119,859

2. **Classification of Holdings.**—The next table gives the numbers of holdings of alienated lands, and of lands in process of alienation, arranged in groups in each State and Territory for which such figures are available for the last five years. In the case of New South Wales and the Federal Capital Territory, prior to 1919-20, many holdings, nearly all from 1 to 5 acres in extent, which were not used for agricultural or pastoral purposes were included. The figures are collected every third year only. Details are not available for Queensland and the Northern Territory.

**CLASSIFICATION OF HOLDINGS (ONE ACRE AND OVER).
NEW SOUTH WALES.**

Size of Holdings.		1915-16.	1918-19.	1919-20.	1920-21.	1921-22.
	Acres.	Number.	Number.	Number.	Number.	Number.
1 to	50	40,033	41,732	22,404	16,556	15,177
51	100	8,586	8,291	8,251	7,841	7,723
101	500	26,405	25,978	26,323	26,278	26,429
501	1,000	9,326	9,982	10,362	10,789	11,069
1,001	5,000	7,971	8,723	9,105	9,463	9,778
5,001	10,000	942	1,014	1,045	1,066	1,090
10,001	20,000	411	455	485	487	503
20,001	50,000	233	233	229	229	218
50,001 and over		76	72	75	71	72
Total		93,983	96,480	78,279	72,780	72,059

VICTORIA.

Size of Holdings.		1906.	1908.	1910.	1912.	1919.
	Acres.	Number.	Number.	Number.	Number.	Number.
1 to	50	13,309	14,692	16,609	18,757	20,866
51	100	5,864	6,223	6,696	7,356	8,036
101	500	21,628	22,510	23,397	24,735	26,246
501	1,000	7,688	7,817	8,216	10,181	11,224
1,001	5,000	4,083	4,409	4,908	5,364	5,865
5,001	10,000	220	231	239	267	290
10,001	20,000	116	118	131	116	117
20,001	50,000	73	61	42	34	35
50,001 and over		6	4	2	1	..
Total		52,987	56,065	60,240	66,811	72,679

SOUTH AUSTRALIA.

Size of Holdings.		1916-17.	1918-19.	1919-20.	1920-21.	1921-22.
	Acres.	Number.	Number.	Number.	Number.	Number.
1 to	50	7,272	7,204	7,120	7,300	7,165
51	100	1,867	1,840	1,822	1,832	1,825
101	500	6,016	5,953	6,024	6,015	6,109
501	1,000	4,057	4,050	4,081	4,243	4,319
1,001	5,000	4,006	4,132	3,991	4,179	4,244
5,001	10,000	127	114	121	114	125
10,001	20,000	43	49	46	40	38
20,001	50,000	24	23	16	14	15
50,001 and over		..	..	..	..	..
Total		23,412	23,365	23,221	23,737	23,840

CLASSIFICATION OF HOLDINGS (ONE ACRE AND OVER)—*continued*.

WESTERN AUSTRALIA.

Size of Holdings.		1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
Acres.		Number.	Number.	Number.	Number.	Number.
1 to	50	3,670	3,754	4,423	4,638	4,785
51 "	100	635	657	756	801	798
101 "	500	2,952	2,938	2,919	2,927	2,898
501 "	1,000	3,170	3,133	3,116	3,181	3,266
1,001 "	5,000	4,187	4,510	4,900	5,301	5,654
5,001 "	10,000	285	299	308	311	328
10,001 "	20,000	93	89	93	89	84
20,001 "	50,000	32	26	22	22	29
50,001 and over		4	6	4	4	5
Total		15,028	15,412	16,541	17,274	17,847

TASMANIA.

Size of Holdings.		1917-18.	1918-19.	1919-20.	1920-21.	1921-22.
Acres.		Number.	Number.	Number.	Number.	Number.
1 to	50	4,606	4,636	4,546	4,539	4,544
51 "	100	2,348	2,363	2,428	2,521	2,523
101 "	500	5,163	5,196	5,237	5,412	5,420
501 "	1,000	788	793	771	776	776
1,001 "	5,000	723	728	731	738	743
5,001 "	10,000	125	126	130	128	127
10,001 "	20,000	56	57	62	60	60
20,001 "	50,000	33	33	31	32	32
50,001 and over		5	5	6	5	5
Total		13,847	13,937	13,942	14,211	14,230

FEDERAL CAPITAL TERRITORY.

Size of Holdings.		1915-16.	1918-19.	1919-20.	1920-21.	1921-22.
Acres.		Number.	Number.	Number.	Number.	Number.
1 to	50	36	34	4	4	3
51 "	100	26	20	5	5	5
101 "	500	65	54	27	26	26
501 "	1,000	27	33	17	18	18
1,001 "	5,000	34	46	16	17	17
5,001 "	10,000	4	9	5	5	6
10,001 "	20,000	..	4	..	..	..
20,001 "	50,000	2	4	1	1	1
50,001 and over		..	..	..	..	..
Total		194	204	75	76	76

§ 13. The Progress of Land Settlement.

1. Recent Progress.—The progress of settlement and the growth of land alienation under recent legislation may be gathered from the subjoined statement, which shows the condition of the public estate in each State at the end of each year from 1919 to 1923 inclusive. The effect of the land laws during the period has been generally to diminish the number of large holdings, at the same time restricting the area held under lease, while both the area alienated and the area in process of alienation have increased. As leases of large areas fall in or are otherwise terminated they are in many cases not renewed, but the land is then divided for the purpose of settlement under systems of deferred payment; the State Governments, also, have in many cases acquired by repurchase considerable areas under the provisions of the various Closer Settlement Acts. Further, greater facilities have been granted to workers to acquire land, and special inducements have been offered to bona fide settlers by the introduction of new forms of tenure on easy terms and conditions.

From 1901 to 1923 the area alienated absolutely in the whole of Australia increased by 36,776,602 acres, or 48.3 per cent.; the area in process of alienation increased by 22,812,932 acres, or 65.1 per cent.; the area leased by 236,876,670 acres, or 32.8 per cent.; while the area unoccupied decreased by 296,466,204 acres, or 27.7 per cent.

AREAS ALIENATED, IN PROCESS OF ALIENATION, HELD UNDER LEASE OR LICENCE AND UNOCCUPIED, 1919 TO 1923.

Year.	Alienated.		In Process of Alienation.		Held under Lease or Licence.		Occupied by the Crown or Unoccupied.	
	Area in Acres.	Per Cent.	Area in Acres.	Per Cent.	Area in Acres.	Per Cent.	Area in Acres.	Per Cent.
NEW SOUTH WALES.—AREA, 198,036,500 ACRES.(a)								
1919	40,380,621	20.39	20,724,214	10.46	116,321,655	58.74	20,610,010	10.41
1920	40,973,189	20.69	20,876,424	10.54	116,773,795	58.97	19,413,092	9.80
1921	41,971,653	21.19	20,667,746	10.44	116,411,054	58.78	18,986,047	9.59
1922	42,714,608	21.57	20,823,001	10.51	115,731,565	58.44	18,767,326	9.48
1923	43,387,416	21.91	20,628,726	10.42	115,698,693	58.42	18,321,665	9.25
VICTORIA.—AREA, 56,245,760 ACRES.								
1919	24,605,825	43.75	8,811,478	15.66	11,014,019	19.58	11,814,438	21.01
1920	24,793,053	44.08	8,746,102	15.55	10,040,119	17.85	12,666,486	22.52
1921	24,903,109	44.28	8,778,124	15.60	8,993,413	15.99	13,571,114	24.13
1922	24,947,732	44.35	8,910,844	15.84	9,290,459	16.52	13,096,725	23.29
1923	25,090,672	44.61	8,875,981	15.78	9,273,378	16.49	13,005,729	23.12
QUEENSLAND.—AREA, 429,120,000 ACRES.								
1919	16,893,719	3.94	9,064,089	2.11	326,783,036	76.15	76,379,156	17.80
1920	17,022,300	3.97	8,659,280	2.02	325,853,774	75.93	77,584,646	18.08
1921	17,152,428	4.00	8,280,296	1.93	317,021,443	73.88	86,665,833	20.19
1922	17,244,544	4.02	7,833,127	1.83	302,966,871	70.60	101,075,458	23.55
1923	17,342,940	4.04	7,358,971	1.71	307,658,290	71.70	96,759,790	22.55
SOUTH AUSTRALIA.—AREA, 243,244,800 ACRES.								
1919	10,857,816	4.46	3,038,084	1.25	114,288,149	46.99	115,060,751	47.30
1920	10,931,966	4.50	3,166,524	1.30	119,554,730	49.15	109,591,580	45.05
1921	11,014,097	4.53	3,192,633	1.31	121,436,409	49.92	107,601,661	44.24
1922	11,068,491	4.55	3,023,556	1.24	117,029,008	48.11	112,123,745	46.10
1923	11,118,771	4.57	3,123,674	1.28	124,638,810	51.24	104,363,545	42.91

(a) To 30th June.

AREAS ALIENATED, IN PROCESS OF ALIENATION, ETC.—*continued.*

Year.	Alienated.		In Process of Alienation.		Held under Lease or Licence.		Occupied by the Crown or Unoccupied.	
	Area in Acres.	Per Cent.	Area in Acres.	Per Cent.	Area in Acres.	Per Cent.	Area in Acres.	Per Cent.

WESTERN AUSTRALIA.—AREA, 624,588,800 ACRES.(a)

1919	8,605,479	1.38	13,237,947	2.12	245,404,589	39.29	357,340,785	57.21
1920	8,763,051	1.40	14,259,769	2.28	257,610,300	41.25	343,955,680	55.07
1921	9,197,088	1.47	15,034,959	2.41	258,504,334	41.39	341,852,419	54.73
1922	9,724,931	1.56	16,031,176	2.56	267,619,907	42.85	331,212,786	53.03
1923	10,051,080	1.61	17,013,586	2.72	262,147,176	41.97	335,376,958	53.70

TASMANIA.—AREA, 16,777,600 ACRES.

1919	5,241,292	31.24	1,054,111	6.28	2,003,661	11.94	8,478,536	50.54
1920	5,241,856	31.24	963,915	5.75	2,273,612	13.55	8,298,217	49.46
1921	5,259,066	31.35	920,206	5.48	2,423,876	14.45	8,174,452	48.72
1922	5,326,825	31.75	880,410	5.25	2,457,620	14.65	8,112,745	48.35
1923	5,407,937	32.23	798,043	4.76	2,419,736	14.42	8,151,884	48.50

NORTHERN TERRITORY.—AREA, 335,116,800 ACRES.

1919	476,476	0.14	..	..	122,718,206	36.62	211,922,118	63.24
1920	476,556	0.14	..	..	143,274,151	42.75	191,366,093	57.11
1921	476,556	0.14	..	..	137,676,653	41.09	196,963,591	58.77
1922	476,556	0.14	..	..	134,488,526	40.13	200,151,718	59.73
1923	476,556	0.14	..	..	136,327,972	40.68	198,312,272	59.18

FEDERAL CAPITAL TERRITORY.—AREA, 601,580 ACRES.

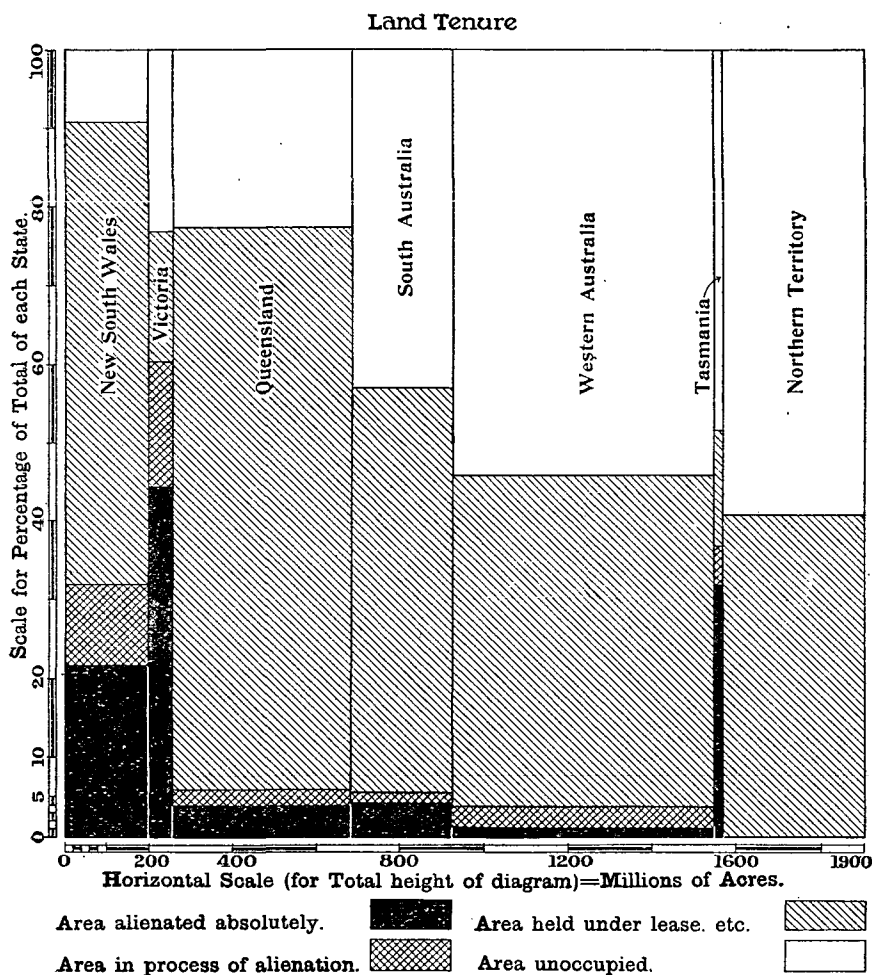
1919	41,269	6.86	79,124	13.15	152,386	25.32	328,801	54.67
1920	41,269	6.86	78,084	12.98	152,386	25.32	329,841	54.84
1921	39,967	6.64	78,064	12.98	152,378	25.32	331,171	55.06
1922	44,708	7.43	66,325	11.03	300,697	49.99	189,850	31.55
1923	43,982	7.31	74,070	12.31	119,899	19.93	363,629	60.45

AUSTRALIA.—AREA, 1,903,731,840 ACRES.

1901	76,142,761	4.00	35,060,119	1.84	721,407,284	37.89	1,071,121,676	56.27
1919	107,102,497	5.63	56,009,047	2.94	938,685,701	49.31	801,934,595	42.12
1920	108,243,240	5.69	56,750,098	2.98	975,532,867	51.24	763,205,635	40.09
1921	110,013,964	5.78	56,952,028	2.99	962,619,560	50.57	774,146,288	40.66
1922	111,548,395	5.86	57,568,439	3.02	949,884,653	49.90	784,730,353	41.22
1923	112,919,363	5.93	57,873,051	3.04	958,283,954	50.34	774,655,472	40.69

(a) To 30th June.

2. Diagram showing Condition of Public Estate.—The following diagram shows the condition of the public estate at the end of the year 1923. The square itself represents the total area of Australia, while the relative areas of individual States are shown by the vertical rectangles. The areas alienated absolutely, in process of alienation under systems of deferred payments, and the areas held under leases or licences, are designated by the differently-shaded areas as described in the reference given below the diagram, while the areas unoccupied are left unshaded :—



CHAPTER VI. OVERSEA TRADE.

§ 1. Introductory.

1. **Constitutional Powers of the Commonwealth in regard to Commerce.**—The powers vested in the Commonwealth Parliament by the Commonwealth Constitution Act with respect to oversea trade and commerce will be found in sub-section 51 (i) and sub-sections 86 to 95 of the Act, which is printed in full in Chapter I. of this volume.

§ 2. Commonwealth Legislation affecting Foreign Trade.

1. **General.**—In previous issues of the Year Book brief particulars of the various Commonwealth Acts and amendments thereof affecting foreign trade have been given in chronological order. It is not proposed to repeat this information in the present issue but the main provisions of the initial Commonwealth Customs Legislation and also of the principal Acts in operation at the present time affecting foreign trade are mentioned hereunder.

2. **Development of Customs Legislation.**—(i) *Customs Act of 1901.* The first Commonwealth Act relating to Customs, entitled “Customs Act 1901 (No. 6 of 1901),” came into operation by proclamation on the 4th October, 1901. This Act provided for the establishment of the necessary administrative machinery for all matters pertaining to the Customs, and prescribed, *inter alia*, the manner in which Customs duties shall be computed and paid. It did not, however, determine the rates of duties.

During the interval between the establishment of the Commonwealth, viz., on 1st January, 1901, and the coming into operation of the Customs Act 1901, the Customs Acts of the several States were administered by the Executive Government of the Commonwealth under Section 86 of the Constitution.

(ii) *Customs Act 1901–1923.* Several amendments of the original Act of 1901 have been made, and the amendments so made have been incorporated in the Customs Act 1901–1923, which comprises the Customs Act 1901 (No. 6 of 1901), as amended by Acts No. 36 of 1910, No. 19 of 1914, No. 10 of 1916, No. 41 of 1920, No. 19 of 1922, and No. 12 of 1923. The Customs Act 1901 has also been amended by the Spirits Act 1906 (No. 21 of 1906), section 5, and by the Customs (Interstate Accounts Act) 1910 (No. 9 of 1910), section 2. Act No. 12 of 1923 provided that aeroplanes, seaplanes, airships, etc., from parts beyond the seas were subject to similar Customs control as those provided for vessels from oversea. This Act is now incorporated in the Customs Act 1901–1923.

(iii) *The First Tariff.*—The first Commonwealth Customs Tariff was introduced in the House of Representatives on the 8th October, 1901, and the “Customs Tariff Act 1902 (No. 14 of 1902)” was assented to on the 16th September, 1902. This Act made provision that uniform duties of Customs specified in the Tariff Schedule should be imposed from the 8th October, 1901. From this date, trade between the States became free, with the exception that under Section 95 of the Constitution Act the right was reserved to the State of Western Australia to levy duty on the goods from other States for five years. Prior to the establishment of the Commonwealth, a different tariff was in operation in each State, and interstate trade was subject to the same duties as oversea trade.

3. **Customs Tariff 1921 (No. 25 of 1921).**—The Tariff Schedule which is now in operation was submitted to Parliament on the 24th March, 1920, and the Act was assented to on the 16th December, 1921. The date of commencement of the imposition of the duties of Customs imposed by this Act was the 25th March, 1920. The Tariff Schedule provides a British Preferential Tariff, an Intermediate Tariff, and a General Tariff. The main provisions of the Act are mentioned hereunder:—

The rates of duty set out in the Schedule in the column headed “British Preferential Tariff” apply to goods the produce or manufacture of the United Kingdom, subject

to the condition that the goods have been shipped in the United Kingdom to Australia, and have not been transhipped, or, if transhipped, then only if it is proved satisfactorily that the intended destination of the goods, when originally shipped from the United Kingdom, was Australia (Section 8).

The provisions of the British Preferential Tariff may be applied wholly or in part to any part of the British Dominions, and the provisions of the Intermediate Tariff may be applied wholly or in part to any part of the British Dominions or to any foreign country.

The Act of 1921 repealed the following Acts:—Customs Tariff 1908 (No. 7 of 1908); Customs Tariff Amendment 1908 (No. 13 of 1908); Customs Tariff 1910 (No. 39 of 1910); Customs Tariff 1911 (No. 19 of 1911); and with the exception of the proposals contained in such Acts relating to the Tariff on goods imported from, and the produce or manufacture of, the Union of South Africa, the Customs Tariff Validation Act 1917, and the Customs Tariff Validation Act 1919.

The Tariff proposals assented to by the House of Representatives on the following dates ceased to have effect as from the time when the Act of 1921 was deemed to have come into operation:—

3rd December, 1914; 12th December, 1914; 9th June, 1915; 12th November, 1915; 10th August, 1917; 26th September, 1917; and 25th September, 1918.

The provisions of the Customs Tariff (South African Preference) 1906 (No. 17 of 1906) and the Tariff proposals relating to the Tariff on goods imported from, and the produce or manufacture of, the Union of South Africa agreed to in the House of Representatives on the 3rd December, 1914, and on 25th September, 1918, were not affected by the Act of 1921.

4. Customs Tariff 1922 (No. 16 of 1922).—This Act was assented to on the 28th September, 1922, and amended the Schedule to the Customs Tariff 1921. The items of import affected by the amendments to the Schedule were—wire, wire fencing, wire netting, traction engines, and alternating current-recording watt-hour meters.

5. Customs Tariff (Sugar) 1922 (No. 32 of 1922).—This Act was assented to on the 18th October, 1922, and amended the Schedule to the Customs Tariff 1921–1922. The amendments related to the duties on sugar, golden syrup and sugar syrups.

6. Customs Tariff 1923 (No. 22 of 1923).—This Act was assented to on 1st September, 1923, and amended the Schedule to the Customs Tariff 1921–22, by inserting in Item 275 of the Schedule after Sub-item A (1) the following proviso:—“Provided that, so long as a bounty is payable on sulphur under any law of the Commonwealth, the importation of sulphur to which this Sub-item applies shall be free of duty.”

7. Customs Tariff 1924 (No. 1 of 1924).—This Act was assented to on 19th May, 1924, and amended item 3 (A) of the Schedule to the Customs Tariff 1921–23 relating to the rates of duty on brandy.

8. South African Preference.—By the Customs Tariff (South African Preference) 1906 it was provided that certain goods, specified in the Schedule to that Act, imported from, and the produce or manufacture of, any of the British South African Colonies or Protectorates included in the South African Customs Union, should be admitted to the Commonwealth at preferential rates as compared with the general rates then in force under the Schedule to the Customs Tariff 1902. Although the Schedule to the Customs Tariff 1902 has been repealed, subsequent enactments have provided for the continuance of the South African Preference. (*vide* Section 15 of Customs Tariff 1921.)

9. British Preference.—The Customs Tariff 1908 (No. 7 of 1908) made provision for preferential rates of Customs duties on certain goods the produce or manufacture of the United Kingdom. This Act was repealed by the Customs Tariff 1921 (No. 25 of 1921), the main provisions of which have already been mentioned.

10. New Zealand Preference.—The Customs Tariff (New Zealand Preference) 1922 (No. 3 of 1922) was assented to on the 23rd August, 1922, and repealed Act No. 27 of 1921. The Act was proclaimed on the 1st September, 1922, and the duties of Customs provided for in the Schedule of the Act came into force on and from that date. The Act provided that the duties of Customs on goods imported direct from, and the produce or manufacture of, the Dominion of New Zealand shall be in accordance with the following rates:—

- (a) On all goods described in the Tariff Schedule against which rates of duty are set out in the column headed "Proposed Duties against New Zealand" the rates so set out.
- (b) On all goods other than those provided for in paragraph (a) the rates of duty for the time being applicable to goods to which the British Preferential Tariff applies.

The Act ratifies and confirms the agreement made on the 11th April, 1922, between the Commonwealth of Australia and the Dominion of New Zealand.

The Act provides that, from and after the 1st May, 1922, duties of Customs on goods not being the produce or manufacture of New Zealand which are imported into the Commonwealth from that Dominion and upon which, if they had been imported into the Commonwealth direct from the country of origin there would have been payable duties of Customs at the rates set out in the British Preferential Tariff shall be in accordance with the rates set forth in that particular tariff.

The Customs Tariff (New Zealand Preference, No. 2).—Act No. 36 of 1922, assented to on 18th October, 1922, relates to the rates of duty on certain imports from New Zealand specified in the schedule to the Act. The goods specified are—meats, preserved in tins or other airtight vessels; sheets and roofing slates composed of cement and asbestos or of similar materials; dairying machines and implements, viz.,—curd agitators and curd mixers; and corn (millet) brooms.

New Zealand Re-exports Act 1924 (No. 21 of 1924) assented to on 16th September, 1924, relates to the value for duty of goods not the produce or manufacture of New Zealand, which are imported into Australia from New Zealand.

11. Tariff Board Act 1921 (No. 21 of 1921).—This Act, which was assented to on the 15th December, 1921, as amended by Tariff Board Act 1923 (No. 25 of 1923), provides for the appointment of a Tariff Board consisting of four members, one of whom shall be an administrative officer of the Department of Trade and Customs. This member shall be appointed Chairman of the Board. The purpose of the Tariff Board is to assist the Minister in the administration of matters relating to trade and customs. The more important matters which the Minister shall refer to the Board for enquiry and report include the classification of goods for duty; the determination of the value of goods for duty; any disputes arising out of the interpretation of any Customs or Excise Tariff; the necessity for new, increased or reduced duties; the necessity for granting bonuses; any proposal for the application of the British Preferential Tariff or the Intermediate Tariff to any part of the British Dominions or any foreign country; and any complaint that a manufacturer is taking undue advantage of the protection afforded him by the tariff by charging unnecessarily high prices for his goods or acting in restraint of trade. The Minister may refer to the Board for enquiry and report the following matters:—the general effect of the working of the Customs Tariff and the Excise Tariff; the fiscal and industrial effects of the Customs laws of the Commonwealth; the incidence between the rates of duty on raw materials and on finished or partly finished products; and any other matter affecting the encouragement of primary and secondary industries in relation to the tariff.

12. Tariff Board Act 1923 (No. 25 of 1923).—This Act, which was assented to on 1st September, 1923, amended the Tariff Board Act 1921. Section 5 of the Principal Act provided for a Tariff Board consisting of three members. The section has been amended by omitting therefrom the word "three" and inserting in its stead the word "four." Section 37 relating to the duration of the Act has also been amended to provide that "the Act shall continue in force for a period of three years and no longer."

Section 6 subsection (3) of the principal Act was amended during 1924 (Act No. 29 of 1924) by providing that members of the Board shall be appointed for a term not being less than one year nor more than three years. This amending Act provides that in inquiries conducted by the Board relating to any revision of the Tariff, any proposal for a bounty, or any complaints that a manufacturer is taking undue advantage of the protection afforded him by the Tariff, shall be held in public and evidence in such inquiries shall be taken in public on oath, unless any witness objects to giving any evidence in public which the Board is satisfied is of a confidential nature, when the Board may take such evidence in private. Evidence taken by the Board in connexion with any inquiry under the Customs Tariff (Industries Preservation) Act 1921-22 shall be taken in public on oath. Section 37 of the Principal Act relating to duration of Act is repealed.

The Annual Report of the Tariff Board, issued in accordance with Section 18 (1) of the Tariff Board Act 1921, reviews the work of the Board to June, 1924. The Report covers:—(a) Operation of the Tariff in regard to—(1) Primary Industries; (2) Secondary Industries; (3) Admission of Goods under By-laws; (4) Tariff Revision; (5) Industries Preservation Act; and (6) General. There are also attached to the Report copies of different reports made by the Tariff Board on matters of particular interest, viz.:—(a) General Report on Western Australia by the Tariff Board and Report of the Tariff and its incidence on Western Australia; (b) Material for use in the construction of the Sydney Harbour bridge; (c) Dumping duty on Wire netting; (d) Appointment of Tariff Boards in different countries, and (e) Wine Industry.

13. Customs Tariff (Industries Preservation) Act 1921 (No. 28 of 1921).—This Act, assented to on the 16th December, 1921, provides that after inquiry and report by the Tariff Board, special duties shall be collected in the following cases when the importation of the goods referred to might be detrimental to an Australian industry:—In the case of goods sold for export to Australia at a price less than the fair market price for home consumption or at a price which is less than a reasonable price, a special dumping duty shall be collected equal to the difference between the price at which the goods were sold and a fair market price. Similar provision is made for goods consigned to Australia for sale. With regard to goods exported to Australia at rates of freight less than the rates prevailing at the time of shipment, there shall be collected a dumping freight duty equal to 5 per cent. of the fair market value of the goods at the time of shipment. Special duties are also imposed in the case of goods imported from countries whose currency is depreciated. Provision is also made for the protection of the trade of the United Kingdom in the Australian market from depreciated foreign currency.

Several amendments of the Act have been recommended by the Tariff Board and have been put into effect. In Section 5 of the Act "a reasonable price" meant such a price as represented the cost of production of the goods, plus 5 per cent., plus free on board charges. The addition of only 5 per cent. to the cost of production was considered to be inadequate, and this was altered to read "such addition not exceeding 20 per cent., as is determined by the Minister after inquiry by the Board." Section 6 (Goods on Consignment) was similarly amended.

Under Section 8, Dumping Exchange Duty (for the protection of Australian industries), as originally provided, the maximum amount of duty that could be imposed was *ad valorem* 75 per cent. Owing to the rapid depreciation of the currency of some European countries after the Act was introduced, the maximum of 75 per cent. proved to be insufficient to meet the competition from such countries. Section 8 was therefore amended, providing that when the currency of the country of origin or export of any goods has depreciated to less than one-twelfth of its normal par value as compared with the pound sterling, the duty which shall be charged under this section shall be the difference between—

- (a) the landed cost in warehouse in Australia (including duty calculated in accordance with the provisions of the Customs Act 1901-1920), plus a percentage of profit to be determined by the Minister after inquiry and report by the Tariff Board, and
- (b) the Australian wholesale price of similar goods of Australian manufacture.

The Act provides that the Minister for Trade and Customs, after inquiry and report by the Tariff Board, may publish a notice in the *Commonwealth Gazette* specifying the goods upon which special rates of duty under this Act shall be charged and collected.

During the period August, 1922, to March, 1925, 270 notices have been gazetted. This number includes notices revoking previous gazettals. The commodities brought under the various sections of the Act exceed 150. The number of notices in force under each section is shown hereunder :—

Section 4.—27 gazettals (below fair market value).

Section 5.—11 gazettals (at less than a reasonable price).

Section 6.—2 gazettals (goods on consignment and which may be sold at a low price).

Section 7.—3 gazettals (goods carried at low freight rates).

Section 8.—63 gazettals (from countries with depreciated currency to detriment of Australian industry).

Section 9.—37 gazettals (from countries with depreciated currency to detriment of British industry).

Section 11.—1 gazettal (if duty payable on goods under previous sections may be evaded by the consignment of the goods).

Sections 4, 5, 6, 7, 8 and 11 protect Australian industries, while sections 9 and 11 protect British industries.

Seventy-five of these gazettals relate to goods imported from Germany. Of the remainder, 14 relate to the United States; 3 to Czecho-Slovakia; 13 to United Kingdom; 8 to Austria; 6 to France; 6 to Belgium; and one or more to the following countries :—Holland, Hungary, Portugal, Spain, Luxemburg, Sweden, Japan, Norway, Canada, and South Africa. Three gazettals relate to imports from all countries while two relate to all countries excepting United Kingdom. The notices cover a very wide range of commodities.

14. Commerce (Trade Descriptions) Act 1905 (No. 16 of 1905).—This Act was assented to on the 8th December, 1905, and brought into operation by proclamation on the 8th June, 1906. It gives power to compel the placing of a proper description on certain prescribed goods, or on packages containing the same, being imports or exports of the Commonwealth. The imports to which a trade description must be applied are :—*(a)* Articles used for food or drink by man, or used in the manufacture or preparation of articles used for food or drink by man; *(b)* medicines or medicinal preparations for internal or external use; *(c)* manures; *(d)* apparel (including boots and shoes), and the materials from which apparel is manufactured; *(e)* jewellery; *(f)* agricultural seeds and plants.

15. Acts Passed in 1924.—The following Acts relating to Australian production and trade were assented to during the year 1924 :—

Canned Fruit Bounty Act 1924 (No. 2 of 1924). An act to provide for the payment of bounties on the production and export of canned fruit.

Cattle Export Bounty Act 1924 (No. 14 of 1924). An Act to provide for the payment of a bounty on the export of live cattle.

Dried Fruits Advances Act 1924 (No. 20 of 1924). An act to provide for the payment of advances to growers of dried fruits.

Dried Fruits Export Control Act 1924 (No. 40 of 1924). An act relating to the export of dried fruit.

Wine Export Bounty Act 1924 (No. 23 of 1924). An act to provide for the payment of bounty on the export of fortified wine.

Dairy Produce Export Control Act 1924 (No. 38 of 1924). An act relating to the export of dairy produce.

Dairy Produce Export Charges Act 1924 (No. 39 of 1924). An Act to impose charges upon the export of dairy produce.

Dried Fruits Export Charges Act 1924 (No. 41 of 1924). An act to impose charges upon the export of dried fruit.

Export Guarantee Act 1924 (No. 42 of 1924). An act to provide for guarantees of advances made upon the export of produce and for other purposes.

Meat Industry Encouragement Act 1924 (No. 55 of 1924). An act to encourage and improve the meat industry of Australia.

§ 3. Method of Recording Imports and Exports.

1. **Value of Imports.**—The recorded value of goods imported from countries beyond Australia as shown in the following tables represents the amount on which duty is payable or would be payable if the duty were charged *ad valorem*. The value of goods is taken to be 10 per cent. in advance of their fair market value in the principal markets of the country whence the goods were exported. Acting upon a recommendation of the Tariff Board the section of the Customs Act relating to the valuation of imports was recently amended, and Section 154 (1) of the Customs Act 1901–1923 now provides that “when any duty is imposed according to value, the value for duty shall be the sum of the following:—

- (a) (i) the actual money price paid or to be paid for the goods by the Australian importer plus any special deduction, or
- (ii) the current domestic value of the goods, whichever is the higher;
- (b) all charges payable or ordinarily payable for placing the goods free on board at the port of export; and
- (c) ten per centum of the amounts specified under paragraphs (a) and (b) of this sub-section.

“Current domestic value” is defined as “the amount for which the seller of the goods to the purchaser in Australia is selling or would be prepared to sell for cash, at the date of exportation of those goods, the same quantity of identically similar goods to any and every purchaser in the country of export for consumption in that country.”

Section 157 of the Customs Act provides that when the invoice value of imported goods is shown in any currency other than British currency, the equivalent value in British currency shall be ascertained according to a fair rate of exchange. Under this section it was the practice of the Department of Trade and Customs, until the 8th December, 1920, to convert on the basis of the mint par of exchange. Since the date mentioned, in consequence of a ruling of the High Court, all conversions have been based on the commercial rates of exchange. As the values for statistical purposes as well as those for duty purposes were based on the mint par, it follows that the recorded values of imports from countries such as France and Italy, where the pound sterling has been at a premium, were, for some time prior to December, 1920, in excess of their commercial value, whereas imports from Japan, the United States of America and other countries where sterling was at a discount, were not given their full commercial value.

2. **Value of Exports.**—The recorded value of goods exported is taken to represent the value in the principal markets of the Commonwealth in the ordinary commercial acceptance of the term.

3. **Customs Area.**—The Customs Area, to which all Oversea Trade statistics issued by this Bureau apply, is the whole area of the Commonwealth of Australia, comprising the States of New South Wales, Victoria, Queensland, South Australia, Western Australia, Tasmania and the Northern Territory (contiguous territory). Other (non-contiguous) territories and mandated areas are treated as outside countries. Trade transactions between the Commonwealth and these non-contiguous territories are included in the oversea trade of the Commonwealth. Such transactions, however, are also registered separately, i.e., the trade of the Commonwealth with each particular country is separately recorded and tabulated.

4. **Statistical Classification of Imports and Exports.**—The Oversea Trade Bulletin No. 21 for the year 1923–24, from which the summary figures in this Year Book are extracted, was compiled according to a revised classification which came into operation on 1st July, 1922. In order to meet the demand for more detailed information relating to Imports and Exports the existing statistical classification was revised and considerably extended during the early part of 1922. Provision was made for recording particulars concerning over 500 additional items of Import, while the number of Export items was also increased. The new classification is divided into 21 classes, with 1,458 separate Import items and 511 Export items.

5. **The Trade Year.**—From the 1st July, 1914, the statistics relating to Oversea Trade are shown according to the fiscal year (July to June). Prior to that date the figures showed the volume of trade during each calendar year.

6. **Records of Past Years.**—In the years preceding federation, each State independently recorded its trade, and in so doing did not distinguish other Australian States from foreign countries. As the aggregation of the records of the several States is, necessarily, the only available means of ascertaining the trade of Australia for comparison with later years, it is unfortunate that past records of values and the direction of imports and exports were not on uniform lines. The figures in the following table for years prior to federation have been carefully compiled and may be taken as representative of the trade of Australia as a whole. On the introduction of the Customs Act 1901, the methods of recording values were made uniform throughout the States, but it was not until September, 1903, that a fundamental defect in the system of recording transhipped goods was remedied. Prior to 1905 the value of ships imported or exported was not included in the returns of trade.

7. **Ships' Stores.**—Prior to 1906 goods shipped in Australian ports on board overseas vessels as ships' stores were included in the general exports. From 1906, ships' stores have been specially recorded as such, and omitted from the return of exports. A table showing the value of these stores shipped each year since 1906 is given later on in this Chapter.

§ 4. Oversea Trade.

1. **Total Oversea Trade.**—(i) *General.* The following table shows the total trade of the Commonwealth with overseas countries from the earliest date for which records are available. To economize space, the period 1826 to 1915-16 has been divided into quinquennia, and the figures shown represent the annual averages for the quinquennia specified. The figures for individual years have been published in previous issues of the Year Book. (a)

OVERSEA TRADE.—AUSTRALIA, 1826 TO 1923-24.

Period.(a)	Recorded Value.			Value per Inhabitant.(b)			Percentage of Exports on Imports.
	Imports.	Exports.	Total.	Imports.	Exports.	Total.	
	£1,000.	£1,000.	£1,000.	£ s. d.	£ s. d.	£ s. d.	%
1826-30 ..	638	153	791	10 12 5	2 10 11	13 3 4	23.9
1831-35 ..	1,144	613	1,757	11 19 10	6 8 6	18 8 4	53.6
1836-40 ..	2,283	1,112	3,395	14 15 9	7 4 1	21 19 10	48.7
1841-45 ..	1,906	1,378	3,284	9 0 5	6 10 5	15 10 10	72.3
1846-50 ..	2,379	2,264	4,643	6 18 10	6 12 2	13 11 0	95.2
1851-55 ..	11,931	11,414	23,345	19 12 5	18 15 4	38 7 9	95.7
1856-60 ..	18,816	16,019	34,835	18 6 1	15 11 8	33 17 9	85.1
1861-65 ..	20,132	18,699	38,831	15 17 1	14 14 9	30 11 10	93.0
1866-70 ..	18,691	19,417	38,108	12 7 4	12 16 11	25 4 3	103.9
1871-75 ..	21,982	24,247	46,229	12 7 2	13 13 6	26 0 8	110.3
1876-80 ..	24,622	23,772	48,394	11 19 7	11 10 9	23 10 4	96.6
1881-85 ..	34,895	28,055	62,950	14 4 3	11 9 5	25 13 8	80.4
1886-90 ..	34,675	26,579	61,254	11 16 11	9 1 0	20 17 11	76.6
1891-95 ..	27,335	33,683	61,018	8 5 2	10 2 5	18 7 7	123.2
1896-1900	33,763	41,094	74,857	9 5 4	11 5 6	20 10 10	121.7
1901-5 ..	39,258	51,237	90,495	10 1 10	13 2 9	23 4 7	130.5
1906-10 ..	51,508	69,336(c)	120,844	12 4 8	16 9 11	28 14 7	134.6
1911-15-16	73,411	74,504	147,915	15 7 4	15 12 10	31 0 2	101.5
1916-17 ..	76,229	97,955	174,184	15 10 0	19 18 3	35 8 3	128.5
1917-18 ..	62,335	81,429	143,764	12 10 3	16 6 9	28 17 0	130.6
1918-19 ..	102,335	113,964	216,299	20 2 9	22 8 7	42 11 4	111.4
1919-20 ..	98,974	149,824	248,798	18 13 2	28 4 11	46 18 1	151.4
1920-21 ..	163,802	132,159	295,961	30 5 7	24 8 5	54 14 0	80.7
1921-22 ..	103,066	127,847	230,913.	18 14 1	23 4 1	41 18 2	124.0
1922-23 ..	131,758	117,870	249,628	23 7 8	20 18 4	44 6 0	89.5
1923-24 ..	140,618	119,487	260,105	24 9 1	20 15 8	45 4 9	85.0

(a) The figures given for the years 1826 to 1915-16 represent the annual averages for the quinquennial periods. The trade of the individual years will be found in the Official Year Book No. 13 and earlier issues. (b) Reckoned on mean population. (c) Prior to 1906 ships' stores were included in the general exports. For value of these goods shipped each year since 1906 see later table.

The graphs of the movement of the oversea trade of Australia which accompany this Chapter show that periods of depressed trade have been recurrent at more or less regular intervals of from seven to nine years, and, measured by population, each succeeding depression since 1855 carried the trade per head lower than the preceding one, until the lowest point was reached in 1894. The heavy decline in the last-mentioned year was due to the acute financial stress which culminated in the commercial crisis of 1893.

There was a slight recovery in 1895, and a continuous upward movement until 1901. A decline, due to drought, in the exports of primary products, reduced the figures for 1902, but from this date until 1907 there was an increase. There was a falling-off in 1908 as compared with 1907, but from 1909 the value of imports and exports showed a steady increase until 1913, the year prior to the war.

The trade of 1914-15 and subsequent years was seriously disturbed by the dislocation of shipping and increased prices arising out of war conditions. The shortage of shipping was particularly marked in 1917-18, when, in order to conserve space for more essential requirements, the importation of goods which were considered to be in the nature of luxuries was prohibited or restricted.

Shipping facilities having improved during 1918-19 the oversea trade of Australia increased rapidly. Imports and exports during that year show heavy increases compared with previous years. The value of imports declined during 1919-20, but exports increased enormously, the total reaching the high figure of £149,823,509.

(ii) *Effect of Prices.* The effect of prices on the value of exports is shown in the "Price Levels" given in §10 hereinafter. On the basis of uniform prices, the exports during the years 1914-15 to 1918-19 were less than for the years immediately preceding the war, and notwithstanding that they include accumulations of wool and wheat which could not be shipped earlier, the exports of 1919-20 were, on the basis of quantities, only 11 per cent. greater than the exports during 1913, though the recorded values were 91 per cent. higher. On a quantitative basis, i.e., eliminating the effect of varying prices—the exports during 1921-22 were greater than in any previous year although the recorded value of exports for the year was less than in 1919-20 and 1920-21. The recorded value of exports declined during 1922-23, as compared with the figures for the three preceding years, and on a quantitative basis the exports of 1922-23 were less than the exports during each of the four previous years and also lower than those of 1913. Compared with the previous year the recorded value of exports during 1923-24 showed a slight increase, but on a quantitative basis the exports were less than during 1922-23.

(iii) *Trade Conditions, 1920-21.* During the year 1920-21 the value of imports increased considerably. This increase was largely due to the fulfilment of long standing orders which it had been impossible to execute earlier. In their anxiety to replenish stocks which had become depleted during the war, and to take advantage of the free spending of soldiers' gratuities and repatriation moneys, Australian importers ordered freely in the belief that their orders could not be satisfied immediately, but hoping to get a percentage thereof. The trade depression in Great Britain, and the cancellation of foreign orders, however, enabled British manufacturers to devote their attention to Australian orders, with the result that shipments, which it had been expected would be spread over a long period were received in quick succession. The rapidity with which the goods arrived created some difficulty in providing exchange, and the banks found it necessary to restrict credit for import business. The value of imports during 1920-21 reached the exceptionally high figure of £163,801,826, an amount greatly in excess of any previous year.

The decline in the value of exports during 1920-21 as compared with 1919-20 was mainly due to reduced exports of wool at lower prices, and to smaller exports of meats, flour, hides and skins, tallow, copper, and lead. As a set-off against these items there was an increase in the exports of wheat of nearly £12,000,000, and of butter of nearly £8,000,000.

(iv) *Trade in 1921-22.* Imports during 1921-22 amounted to £103,066,436, and the total exports were valued at £127,846,535, of which £123,487,513 was Australian produce.

The trade position was, therefore, very much improved as compared with the previous year, by a reduction of 37 per cent. in the value of imports accompanied by a fall in the value of exports of only 3.2 per cent.

(v.) *Trade in 1922-23.* A reversal of the trade position occurred in 1922-23, when imports were greatly in excess of exports. The value of goods imported during the year was £131,747,835, while exports were valued at £117,870,147. Compared with the previous year, the value of imports increased 27 per cent. and exports declined 8 per cent. The heavy decline in the exports of wheat was mainly responsible for the decrease in the total value of exports during this year. The total was also affected by the smaller figures for flour and butter as compared with previous years. The value of wool exported during 1922-23 reached £57 millions, or 48 per cent. of the total exports.

(vi.) *Trade in 1923-24.* The total oversea trade during the year 1923-24 was £260,105,457, as compared with £249,627,982 during the previous year. The increased trade was mainly due to imports. The balance of trade during the year was greatly in favor of imports, the value of which (£140,618,293) exceeded that of exports (£119,487,164) by £21 millions. Machinery and manufactures of metal, including motor cars and other vehicles, represented 31 per cent., and attire, apparel, textiles and manufactured fibres 27 per cent. of the total value of imports during 1923-24. Exports of wool and wheat accounted for 59 per cent. of the total value of exports during the year, the value of these two commodities exceeding 70 millions sterling.

2. *Ratio between Exports and Imports.*—The foregoing table shows the percentage of exports on imports for each quinquennial period from 1826-30 to 1911-15 and for each financial year since 1915-16. Prior to the quinquennial period 1891-95 the balance of trade, with two exceptions, due to temporary dislocations, has been on the side of imports, while from that period to 1919-20 the position was reversed. From the 1st July, 1920, to the end of June, 1924, there has been an excess of imports, though the results for each of those years have not been consistently in that direction.

The excess of imports in the earlier years represents the introduction of capital into Australia in the form of Government loans or for investment in private undertakings, and the excess of exports which appears for many subsequent years represents mainly the interest and profit on the earlier investments, repayments of loans to oversea bondholders, and freight on trade carried chiefly on vessels of the United Kingdom and foreign countries. As the introduction of new capital, and the payments for interest on existing investments and for shipping and other services are continually operating in opposite directions at the same time in the statistics of trade, it follows that it is the balance only of these transactions which is reflected in the excess of imports or exports.

Trade balances are further modified by the loans floated abroad by local governing bodies, by the imports of foreign capital for private enterprises, and by the addition to or the absorption of bank balances held in London on Australian account. Definite information regarding these items is not readily available. Other factors which affect trade balances to a certain extent are the financial arrangements made by immigrants to Australia and also by tourists in Australia from abroad. The purchase in Australian ports of bunker coal and other stores for vessels owned outside Australia is also a matter of some importance.

Against these items, however, account must be taken of the capital of persons emigrating from Australia and the travelling and other expenses of tourists from Australia to other parts of the world. These expenses would include fares on all steamers not owned in Australia, and since the termination of the war would represent very large sums, the total of which could not be readily ascertained.

The following table presents the balance of trade of Australia as shown by the records of imports and exports for each year since 1st July, 1914, and also the modification of these figures by loans raised abroad by the Commonwealth and State Governments. In the exceptional circumstances arising from the war the excess of exports during this period is somewhat understated, as much of the wool exported appeared in the records at appraised rates, whereas sales effected later by the British Australian Wool Realization Association (B.A.W.R.A.) made considerable additions to the funds available in London on Australian account. Allowance has been made in the table for this increased value.

of wool exported. An approximation of Australia's annual liability for interest and services is also shown; any error in these figures will be in the direction of an understatement.

BALANCE OF AUSTRALIAN TRADE FROM 1st JULY, 1914, TO MARCH, 1925.

Year.	Recorded excess of Exports.	Increase in Public Debt (Commonwealth and State) raised abroad.	B.A.W.R.A. Dividends.	Total of Columns (2), (3), and (4).	Approximate annual obligations abroad for interest and services.	Addition to Funds available abroad for transmission to Australia.	
						For the Year.	Accumulated from 1st July, 1914.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	£1,000,000	£1,000,000	£1,000,000	£1,000,000	£1,000,000	£1,000,000	£1,000,000
1914-15 ..	- 3.8	5.1	..	1.3	16.0	-14.7	-14.7
1915-16 ..	- 3.0	4.3	..	1.3	17.2	-15.9	-30.6
1916-17 ..	21.7	18.6	..	40.3	18.4	21.9	- 8.7
1917-18 ..	19.1	20.9	..	40.0	22.0	18.0	9.3
1918-19 ..	11.6	.5	..	12.1	22.2	-10.1	- .8
1919-20 ..	50.8	10.8	..	61.6	23.2	38.4	37.6
1920-21 ..	-31.6	11.3	7.7	-12.6	24.3	-36.9	.7
1921-22 ..	24.8	42.2	9.9	76.9	26.7	50.2	50.9
1922-23 ..	-13.9	3.8	5.9	- 4.2	26.8	-31.0	19.9
1923-24 ..	-21.1	28.1	5.3	12.3	27.0	-14.7	5.2
1924-25 (9 months)	9.2	16.0	..	25.2	21.0	4.2	9.4
Total ..	63.8	161.6	28.8	254.2	244.8	9.4	...

Although the data used in computing the figures in the table are necessarily incomplete, the general accuracy of the results to the close of the year 1920-21 is confirmed by the exchange rates of that time. The figures given show that in June, 1921, Australian funds in London were at practically the same level as at 30th June, 1914; while at the later date the quoted buying price of the Associated Banks of Australia for "telegraphic transfers" on London was at a premium of 20s. per £100. On a similar basis the amount of Australian money held in London and elsewhere at the end of March, 1925, was about £9,400,000 in excess of the amount so held at 30th June, 1914, while "telegraphic transfers" on London were quoted at 70s. per cent. discount buying. On the other hand, in June, 1922, when the balance of funds for transmission to Australia was very high, similar transfers were quoted at 5s. per cent. discount; and a year later, when there was still a large balance of funds outstanding, the buying price was 25s. per cent. discount. The apparent inconsistency between the relatively small amount of money held abroad (as determined above) and the high rates operating in March, 1925, for the transfer of money to Australia, might have been due in some measure to the prospective further borrowing by Australian governments in the near future, and to the investment of British or foreign capital in Australian industries or in Government loans in Australia. The high rate of exchange, on the other hand, may have indicated a variation in the relative values of the British and the Australian currencies.

Proclamations issued on 14th July, 1915, and 22nd February, 1922, prohibiting the exportation of Gold Specie and Bullion from the Commonwealth except with the consent in writing of the Treasurer, were revoked by a proclamation gazetted on 28th April, 1925. The immediate effect of the lifting of the embargo on the export of gold was a noticeable reduction in the exchange rates. "Telegraphic transfers" on London quoted at 70s. per cent. discount buying declined to 15s. per cent.

The exchanges between Australia and New Zealand and London have been the subject of much discussion in political, financial, and commercial circles; but, hitherto, no generally acceptable explanation of the position has been forthcoming.

§ 5. Direction of Trade.

1. Imports according to Country of Origin.—The following table shows the value of the imports into Australia stated to be the produce or manufacture of the under-mentioned countries during the past five years:—

AUSTRALIAN IMPORTS—COUNTRIES OF ORIGIN, 1919-20 TO 1923-24.

Country of Origin.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
	£	£	£	£	£
United Kingdom	38,516,436	76,849,934	53,001,926	68,394,423	63,607,743
British Possessions—					
Canada	2,640,280	4,425,262	3,146,450	5,064,253	5,046,519
Ceylon	1,675,443	838,340	1,009,477	1,001,412	1,251,392
India	4,777,905	7,312,832	3,747,023	4,393,685	4,800,086
Malaya (British) ..	354,179	284,886	571,544	272,759	494,930
New Zealand	1,930,049	1,995,897	1,702,997	2,005,307	2,514,225
Pacific Islands—					
Fiji	285,456	204,775	217,248	116,290	61,866
Territory of New Guinea ..	626,151	635,370	619,537	418,420	99,558
Other Islands	750,309	988,085	907,547	777,085	988,449
Papua	218,006	325,773	163,232	209,193	471,953
South African Union ..	964,195	534,118	356,869	758,720	1,052,156
Other British Possessions*	1,011,737	891,150	565,213	603,210	739,198
Total British Possessions ..	15,233,710	18,436,488	13,007,131	15,623,334	17,520,362
Total British Countries ..	53,750,146	95,286,422	66,009,057	84,017,757	81,128,105
Foreign Countries—					
Belgium	276,940	1,029,647	950,952	906,050	902,534
China	1,094,427	1,034,306	950,772	873,579	925,045
France	2,422,304	3,597,811	2,731,739	3,231,197	4,101,137
Germany	13,474	56,944	85,976	593,812	1,368,904
Italy	581,038	828,217	944,226	1,174,489	1,242,790
Japan	4,222,511	5,230,039	3,581,614	3,936,150	3,557,834
Netherlands	196,712	613,926	498,824	580,888	597,682
Netherlands East Indies ..	8,313,874	8,798,957	3,236,970	4,361,302	4,607,681
Norway	831,909	1,920,997	848,134	1,686,439	1,415,339
Pacific Islands	262,377	152,938	119,127	94,884	86,471
Philippine Islands	204,958	209,170	151,106	168,742	170,135
Sweden	793,945	2,751,827	1,238,327	1,629,515	2,031,872
Switzerland	959,826	2,016,156	1,836,291	2,189,854	2,274,296
United States of America ..	23,826,313	36,113,477	18,823,113	24,851,303	34,556,529
Other Foreign Countries†	1,223,538	3,260,992	1,060,208	1,461,874	1,651,939
Total Foreign Countries ..	45,224,146	68,515,404	37,057,379	47,740,078	59,490,188
Total	98,974,292	163,801,826	103,066,436	131,757,835	140,618,293

* Includes Egypt during the years 1919-20, 1920-21, and 1921-22.

† Includes Egypt during the years 1922-23 and 1923-24.

The value of imports into Australia fluctuated considerably during the five years under review. The lack of shipping materially affected the importation of commodities during the war period, and the value of imports during each of the war years was lower than that of 1913, the year prior to the war. Shipping facilities became practically normal during the early part of 1919, and the value of imports for the year 1918-19 was 40 millions in excess of that for the previous year. Imports declined slightly during 1919-20, but increased abnormally during the following year, when the value reached the exceptionally high figure of 163 millions. The enhanced price of commodities and the peculiar conditions affecting Australian trade during this period were responsible for the high value of imports during 1920-21, and in making comparisons with imports during pre-war years these facts should be taken into consideration. The exceptional conditions affecting Australian trade during 1920-21 have already been mentioned in a previous paragraph.

Compared with 1920-21 the value of imports during 1921-22 showed a decrease of over 60 millions. This heavy decline was partly due to the exceptional importations of the previous year and partly to the lower prices of commodities during the later year. Imports in 1922-23 were greatly in excess of those for 1921-22, but the total value of the commodities imported during the year was 32 millions less than in 1920-21. The heavy importation of goods continued during 1923-24, the total value exceeding 140 millions, an amount nearly nine millions in excess of the imports during the previous year.

In view of the effect that the varying prices of commodities had upon the value of imports during the period under review it is somewhat difficult to ascertain from the preceding table the relative importance of the various countries in the import trade of Australia. A better idea of the proportion of imports supplied by each country during each year may be obtained from the following table of percentages.

2. *Percentage of Imports from Various Countries.*—The following table gives the relative proportions of the import trade of Australia which have been supplied by the various countries, together with the proportions furnished by the United Kingdom, British Possessions and foreign countries respectively.

**AUSTRALIAN IMPORTS.—PERCENTAGES FROM COUNTRIES OF ORIGIN,
1919-20 TO 1923-24.**

Country of Origin.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
	per cent.	per cent.	per cent.	per cent.	per cent.
United Kingdom	38.91	46.92	51.43	51.90	45.24
British Possessions—					
Canada	2.67	2.70	3.05	3.84	3.59
Ceylon	1.69	0.51	0.98	0.76	0.89
India	4.83	4.46	3.64	3.33	3.41
Malaya (British) ..	0.36	0.17	0.55	0.21	0.35
New Zealand	1.95	1.22	1.65	1.52	1.79
Pacific Islands—					
Fiji	0.29	0.12	0.21	0.09	0.04
Territory of New Guinea	0.63	0.39	0.60	0.32	0.07
Other Islands ..	0.76	0.60	0.88	0.58	0.70
Papua	0.22	0.21	0.16	0.16	0.34
South African Union ..	0.97	0.33	0.35	0.58	0.75
Other British Possessions*	1.02	0.54	0.55	0.46	0.53
Total British Possessions	15.39	11.25	12.62	11.85	12.46
Total British Countries ..	54.30	58.17	64.05	63.75	57.70
Foreign Countries—					
Belgium	0.28	1.18	0.92	0.69	0.64
China	1.11	0.63	0.92	0.67	0.66
France	2.45	2.20	2.65	2.45	2.92
Germany	0.01	0.04	0.08	0.45	0.97
Italy	0.59	0.51	0.91	0.89	0.88
Japan	4.27	3.19	3.48	2.99	2.53
Netherlands	0.20	0.37	0.48	0.44	0.42
Netherlands East Indies ..	8.40	5.37	3.14	3.31	3.28
Norway	0.84	1.17	0.82	1.28	1.01
Pacific Islands	0.26	0.09	0.12	0.07	0.06
Philippine Islands ..	0.21	0.13	0.15	0.13	0.12
Sweden	0.80	1.68	1.20	1.24	1.44
Switzerland	0.97	1.23	1.78	1.66	1.62
United States of America ..	24.07	22.05	18.27	18.87	24.58
Other Foreign Countries† ..	1.24	1.99	1.03	1.11	1.17
Total Foreign Countries	45.70	41.83	35.95	36.25	42.30
Total	100	100	100	100	100

* Includes Egypt during the years 1919-20, 1920-21, and 1921-22.

† Includes Egypt during the years 1922-23, and 1923-24.

The percentage of imports from the United Kingdom increased steadily during the first four years of the quinquennial period under review, the proportion increasing from 38.91 per cent. in 1919-20 to 51.90 per cent. in 1922-23. A noticeable decline in the percentage therefrom occurred, however, in 1923-24, the proportion being 45.24 per cent., a decrease of 6.66 per cent. compared with 1922-23. Whilst the proportion of imports from the United Kingdom declined, that from the United States increased from 18.87 per cent. in 1922-23 to 24.58 per cent. in 1923-24. The value of imports from the last-mentioned country was £34,556,529 during 1923-24, as compared with

£24,851,303 during 1922-23. The corresponding figures for the United Kingdom were £63,607,743 in 1923-24 and £68,394,423 in 1922-23. The percentages of imports from Japan and Netherlands East Indies show reduced figures in 1923-24 as compared with 1919-20, but the percentages for the last two years have remained fairly uniform. There have been no outstanding alterations in the proportions of the imports supplied by other countries.

3. Direction of Exports.—The following tables show a decreasing proportion of Australian exports to the United Kingdom, and increasing proportions to France, Belgium, Germany, Netherlands, Japan and China. The reservation to the United Kingdom of the first call on Australian primary products increased the proportion of exports to that country during the war period, but since the termination of the war there has been an increasing tendency towards direct shipment of the more important commodities, such as wool, skins, wheat, flour, butter, etc., to the consuming countries. The value of exports shipped to the United States during 1923-24 shows a considerable decrease compared with the previous years. The value of imports from United States generally exceeds the value of exports from Australia to that country, but the difference was very marked during 1923-24, when the value of imports from United States was no less than 27 millions in excess of the value of the Australian exports. The following table shows the value of exports from Australia to the more important countries during the five years 1919-20 to 1923-24:—

EXPORTS FROM AUSTRALIA TO VARIOUS COUNTRIES, 1919-20 TO 1923-24.
(INCLUDING BULLION AND SPECIE.)

Country.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
	£	£	£	£	£
United Kingdom	80,784,096	67,519,740	57,742,767	51,975,381	45,508,323
British Possessions—					
Canada	312,452	154,899	373,570	364,732	235,947
Ceylon	354,810	290,131	711,163	814,435	2,453,465
Egypt	2,769,331	6,607,172	3,523,355	*	*
Fiji	664,634	732,251	573,401	352,744	389,059
Hong Kong	2,599,757	866,839	536,596	501,874	776,998
India	2,439,935	2,193,006	6,770,067	3,107,584	1,201,777
Malaya (British)	6,216,398	2,121,090	1,876,648	1,343,029	1,549,220
Mauritius	102,944	117,554	145,352	134,997	126,586
New Zealand	7,743,744	7,780,763	4,619,655	4,302,281	5,008,152
Papua	308,159	292,851	172,419	219,225	214,839
South African Union	3,044,351	3,049,507	1,660,359	1,967,861	2,046,099
Other British Possessions	1,293,421	1,701,305	880,614	977,326	986,503
Total British Possessions	27,849,936	25,916,368	21,843,199	14,086,088	14,968,645
Total British Countries	108,634,032	93,436,108	79,585,966	66,061,469	60,476,968
Foreign Countries—					
Belgium	4,263,608	6,845,925	5,015,976	4,299,926	6,524,169
Chile and Peru	181,928	227,037	227,538	197,845	168,119
China	543,365	328,087	509,339	278,121	1,947,030
Egypt				†1,583,785	2,321,083
France	6,671,878	6,409,862	8,701,179	12,296,665	14,888,846
Germany	16,520	1,457,119	4,003,726	4,186,864	4,402,913
Italy	3,771,544	2,547,810	8,047,291	5,950,726	4,633,185
Japan	7,229,501	3,117,572	7,052,547	9,309,560	11,555,484
Netherlands	11,005	1,264,530	765,725	640,818	1,911,114
Netherlands East Indies	3,119,766	2,568,619	2,368,197	1,862,364	1,602,013
Norway	500,208	170,532	300,389	47,696	34,275
Pacific Islands	724,666	757,541	482,666	451,280	367,784
Philippine Islands	1,061,463	420,870	565,063	568,648	523,618
Spain	866	287,669	354,405	932	317,034
Sweden	256,702	136,500	25,180	168,112	409,466
United States of America	11,129,937	9,965,575	8,314,386	9,630,770	7,109,496
Other Foreign Countries	1,706,520	2,217,556	626,962	334,066	294,567
Total Foreign Countries	41,189,477	38,722,804	48,260,569	51,808,678	59,010,196
Total	149,823,509	132,158,912	127,846,535	117,870,147	119,487,164

* Now recorded under Foreign Countries.

† Previously recorded under British Possessions.

4. Percentage of Exports to Various Countries.—The following table gives the relative proportions of the export trade of Australia with the countries specified, together with the proportions shipped to the United Kingdom, British Possessions and foreign countries respectively:—

EXPORTS FROM AUSTRALIA.—PERCENTAGES TO VARIOUS COUNTRIES,
1919-20 TO 1923-24.

Country.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
	per cent.	per cent.	per cent.	per cent.	per cent.
United Kingdom	53.92	51.10	45.16	44.10	38.09
British Possessions—					
Canada	0.21	0.12	0.29	0.31	0.20
Ceylon	0.24	0.22	0.56	0.69	2.05
Egypt	1.85	5.01	2.76	*	*
Fiji	0.44	0.53	0.45	0.30	0.32
Hong Kong	1.74	0.65	0.42	0.43	0.65
India	1.63	1.66	5.30	2.64	1.01
Malaya (British)	4.15	1.61	1.47	1.14	1.30
Mauritius	0.07	0.09	0.11	0.11	0.11
New Zealand	5.17	5.90	3.61	3.65	4.19
Papua	0.21	0.22	0.13	0.19	0.18
South African Union	2.02	2.31	1.30	1.67	1.71
Other British Possessions ..	0.86	1.29	0.69	0.83	0.81
Total British Possessions	18.59	19.61	17.09	11.96	12.53
Total British Countries ..	72.51	70.71	62.25	56.06	50.62
Foreign Countries—					
Belgium	2.85	5.18	3.92	3.65	5.46
Chile and Peru	0.12	0.17	0.18	0.17	0.14
China	0.36	0.25	0.40	0.24	1.63
Egypt .. ..	..	..	..	†1.34	1.94
France	4.45	4.86	6.81	10.43	12.46
Germany	0.01	1.10	3.13	3.55	3.68
Italy	2.52	1.93	6.29	5.05	3.88
Japan	4.83	2.36	6.22	7.90	9.67
Netherlands	0.01	0.96	0.60	0.54	1.60
Netherlands East Indies ..	2.08	1.94	1.85	1.58	1.34
Norway	0.33	0.12	0.24	0.04	0.03
Pacific Islands	0.48	0.57	0.38	0.38	0.31
Philippine Islands	0.71	0.32	0.44	0.48	0.44
Spain	0.00	0.21	0.28	0.00	0.27
Sweden	0.17	0.10	0.02	0.14	0.34
United States of America ..	7.43	7.55	6.50	8.17	5.95
Other Foreign Countries ..	1.14	1.67	0.49	0.28	0.24
Total Foreign Countries	27.49	29.29	37.75	43.94	49.38
Total	100	100	100	100	100

* Now recorded under Foreign Countries.

† Previously recorded under British Possessions.

5. **Principal Imports and Exports—Countries.**—The total value of imports from, and exports to, each of the more important countries, together with brief particulars of the principal commodities interchanged with such countries are given hereunder. Should further details be required reference may be made to the annual publication "Oversea Trade Bulletin, No. 21," issued by this Bureau, which gives details of the trade of 38 of the principal countries of the world with Australia during the past five years. This publication also furnishes information regarding the country of origin of each statistical item of imports for the years 1922-23 and 1923-24, showing the value and (where available) the quantity imported from each country. The value of each item imported into each State of the Commonwealth is also shown. The publication referred to also gives information as to the country to which each item of exports was shipped during the years 1922-23 and 1923-24.

United Kingdom. Total Imports of United Kingdom Origin, £63,607,743. The two outstanding classes of goods imported were—Apparel, textiles, yarns, etc, £24,979,055, and machines, machinery and manufactures of metal, £22,347,802. Imports of the undermentioned goods also contributed largely to the total:—Whisky; china and earthenware; paper and stationery; drugs and chemicals; and vessels (ships.)

Total Exports to United Kingdom, £45,508,323. Of this total £44,583,940 represented Australian produce. The principal items of export were—Wool, £20,136,750; wheat, £5,415,124; and butter, £3,996,201. Other commodities which bulked largely were—Frozen beef, mutton, and lamb; cheese; flour; fruits, fresh, and dried; hides and skins; tallow; leather; copper; lead; tin and zinc.

United States of America. Total Imports of United States Origin, £34,556,529. The following were the more important items of import:—Tobacco, manufactured and unmanufactured, £2,790,108; petroleum spirit, benzine, £2,333,273; motor chassis, bodies, etc., £6,735,053; rubber manufactures, £1,314,514; undressed timber, £2,762,303; apparel, textiles, etc.; kerosene, lubricating and other oils; electrical machinery, materials and appliances; printing machinery; manufactures of metals; musical instruments; films for cinematographs; sulphur; preserved fish; gums and resins; leather; and sausage casings.

Total Exports to United States, £7,109,496. Of this total £6,999,312 represented Australian produce. The principal exports were—Wool, £4,323,239; rabbit, kangaroo, and opossum skins, £1,055,997; gold specie, £380,520; pearlshell; sausage casings; coal; hides; and tin. The value of the above commodities represents 93 per cent. of the total exports to the United States.

India. Total Imports of Produce or Manufacture of India, £4,800,086. Bags and sacks valued at £2,718,548 represent 57 per cent. of the total imports. The other principal items were—Hessians; rice; tea; hides and skins; linseed; paraffin wax; gums and resins; precious stones; coffee and chicory; and spices.

Total Exports to India, £1,201,777. Of this total £1,197,228 represented Australian produce. The chief exports were—Gold specie, £65,232; silver, £638,029; undressed timber; coal; copper; tallow; jams and jellies; preserved milk and cream; horses; and wool.

Japan. Total Imports of Japanese Origin, £3,557,834. Principal imports—Piece goods of silk or containing silk, £1,918,590; cotton and linen piece goods, £490,101; china and porcelain ware; glass and glassware; undressed timber; fancy goods; brushware; apparel and attire; and oils.

Total Exports to Japan, £11,555,484. Of this total £11,430,468 was Australian produce. Chief exports—Wool, £6,212,881; wheat, £2,980,952; tallow; pig lead; zinc; apparel; flour; trochus shell; milk and cream; and vessels (ships).

Netherlands East Indies. Total Imports of Netherlands East Indies Origin, £4,607,681. The principal imports were—Petroleum spirit, including benzine, etc., £1,685,022; tea, £1,714,086; kerosene; crude petroleum; crude rubber; kapok; coffee and chicory; spices; tobacco; and flax and hemp.

Total Exports to Netherlands East Indies, £1,602,013. Of this total £1,577,013 was the produce of Australia. Chief exports were—Flour, £558,052; butter, £438,985; preserved milk and cream; coal; leather; bacon and hams; biscuits; and soap.

Canada. Total Imports of Canadian Origin, £5,046,519. The principal imports were—Chassis for motor cars, £1,983,227; bodies for motor cars, £88,853; printing paper, £63,535; wrapping paper, £94,521; undressed timber, £502,899; rubber manufactures, £545,906; preserved fish; apparel and textiles; agricultural implements; corsets; metal manufactures; other paper and stationery.

Total Exports to Canada, £235,947. Of this total £228,638 was Australian produce. Chief items were—Wool—greasy, scoured, and tops, £154,323; meats; and hides and skins.

France. Total Imports of French Origin, £4,101,137. Chief imports were—Piece goods of silk or containing silk, £1,115,222; trimmings for attire, £320,570; motor cars and parts, £348,892; lace for attire; brandy; wine; rubber manufactures; cream of tartar; perfumery and toilet preparations; fancy goods; tobacco-pipes; gloves; olive oil; apparel and attire; and paper manufactures.

Total Exports to France, £14,888,846. Of this total £14,635,362 was Australian produce. Principal exports were—Wool, £12,278,938; wheat, £819,694; sheep skins, £1,255,522; butter; copra; concentrates; zinc; and beef.

Switzerland. Total Imports of Swiss Origin, £2,274,296. Chief items were—Piece goods of silk, £829,395; trimmings and ornaments for attire, £304,565; lace for attire; clocks and watches; grass straw for manufacture of hats; and handkerchiefs.

Total Exports to Switzerland, £34,793. Chief items were greasy wool, £26,284; and timepieces and parts, £6,866.

Pacific Islands (British and Foreign). Total Imports of Produce of the Pacific Islands, £1,236,374. Chief items were—Copra, £257,208; rock phosphates, £678,446; sugar, molasses, etc.; cocoa beans; cattle; hides; and guano.

Total Exports to Pacific Islands, £1,548,418. Of this amount £973,393 was the produce of Australia. The exports to these islands cover a very wide range of commodities. The outstanding items were—Foodstuffs of vegetable origin, £422,143; apparel, textiles, etc., £168,796; coal and coke, £140,057; machines, machinery and metal manufactures, £179,789; foodstuffs of animal origin, £99,949; and tobacco, cigars, and cigarettes, £100,634. The chief individual items were—Butter; meats; biscuits; flour; rice; sugar; potatoes; tea; ale and porter; spirits; tobacco and cigarettes; boots; canvas and duck; cotton piece goods; kerosene; undressed timber; soap; and fertilizers.

New Zealand. Total Imports of New Zealand Origin, £2,514,225. The principal items were—Timber, £510,721; hides and skins, £545,001; wool, £426,057; butter, £189,968; tallow, £108,636; flax and hemp; oakum and tow; linseed and other seeds; smoked fish; meats; horses; cattle; and grain and pulse.

Total Exports to New Zealand, £5,008,152. Of this total £4,024,466 was Australian produce. The chief items were—Apparel, textiles and manufactured fibres, £231,269; machinery and metal manufactures, £501,340; coal, £803,178; manufactured tobacco, £315,495; undressed timber, £475,854; wheat, £293,686; rubber manufactures; leather; dried and fresh fruits; confectionery; and medicines. The remaining exports covered a very large range of commodities and included a number of items not the produce of Australia, such as spirits, rice, tea, paints, dyes, glassware, earthenware, etc.

Sweden. Total Imports of Swedish Origin, £2,031,872. Chief items were—Printing paper, £315,763; cream separators, £112,824; wood pulp, £93,846; dressed and undressed timber, £730,111; electrical machinery and appliances, £62,330; wrapping and other paper, £271,201; and matches, £215,300.

Total Exports to Sweden, £409,466. Chief items were—Wool, £81,470; wheat, £297,858; hides—cattle, £26,613.

Ceylon. Total Imports of Ceylon Origin, £1,251,392. The chief items were—Tea, £1,061,654; nuts, £95,145; rubber; cocoa beans; fibres; and yarns.

Total Exports to Ceylon, £2,453,465. Of this total £2,448,126 was Australian produce; The principal exports were—Gold specie, £1,929,307; gold—bar, dust, ingot, sheet, £268,646; flour, £103,477; undressed timber; butter; preserved milk; silver; and preserved meats.

Belgium. Total Imports of Belgian Origin, £902,534. Principal imports were—Iron and steel—bar, angle, hoop, etc., £24,875; glass and glassware, £395,545; cotton and linen piece goods, £69,743; apparel; gloves; parchment; cameos and precious stones (unset); matches; and chassis for motor cars.

Total Exports to Belgium, £6,524,169. Of this total £6,491,085 was the produce of Australia. Chief items were—Wool, £4,951,127; wheat, £145,217; hides and skins, £278,754; zinc concentrates, £764,750; silver and silver-lead ore and concentrates, £85,700; barley, £93,926; beef, £96,270; copra; and pig lead.

China. Total Imports of Chinese Origin, £925,045. The principal items were—Silk piece goods, £88,500; lace for attire, £57,457; rice, £63,421; tea, £179,226; edible nuts; preserved ginger; china and other oils; raw cotton; grass straw; and hair and fibre.

Total Exports to China, £1,947,030. Of this total £1,924,627 was Australian produce. Principal items were—Silver—bar, ingot, &c., £243,501; gold—bar, ingot, &c., £114,115; butter, £61,571; sandalwood, £83,415; flour, £128,498; wheat, £1,014,864; tallow; leather; jams and jellies; undressed timber; and pig lead.

Italy. Total Imports of Italian Origin, £1,242,790. Chief imports were—Chassis for motor cars, £339,414; silk piece goods, £159,419; edible nuts, £64,463; hides and skins, £29,629; hats, £116,510; essential oils; flax and hemp; marble; gloves; works of art; and paper and stationery.

Total Exports to Italy, £4,633,185. Of this total, £4,606,727 was Australian produce. Chief exports were—Wheat, £1,558,892; wool, £2,634,990; tallow, £53,292; hides and skins, £198,473; copra, £25,332; beef, £115,819; flour; and zinc.

Norway. Total Imports of Norwegian Origin, £1,415,339. Principal items were—Paper, £419,571; timber, dressed and undressed, £555,553; preserved fish, £339,163; wood pulp, £25,725; and matches, £13,742.

Total Exports to Norway, £34,275. Of this total the principal items were wheat, £24,387; and wool, £4,930.

Malaya (British). Total Imports of (British) Malayan Origin, £494,930. Principal items were—Rubber, £319,448; sago and tapioca, £82,682; spices, £42,718; resins; kapok; and bamboo and cane.

Total Exports to (British) Malaya, £1,549,220. Of this total, £1,515,006 was the produce of Australia. Chief exports were—Preserved milk and cream, £492,116; gold, £34,790; flour, £393,035; mining machinery, £156,494; butter, £67,523; coal, £76,913; sheep; horses; bacon and ham; preserved and frozen meat; leather; and sandalwood.

Netherlands. Total Imports of Netherlands Origin, £597,682. Principal items were—Metal manufactures; piece goods; cocoa and chocolate; paper; gin and schnapps; jewellery; and electrical machinery.

Total Exports to Netherlands, £1,911,114. Chief exports were—Wool, £1,625,493; copra, £46,282; flour, £127,030; wheat, £32,807; hides and skins, £51,976.

South African Union. Total Imports of Produce of South African Union, £1,052,156. Principal items were—Precious stones, £236,803; explosives, £89,795; maize, £513,855; fish, £75,910; fancy goods; tanning bark; fibres and seeds.

Total Exports to South African Union, £2,046,099. Of this total £2,036,892 was the produce of Australia. Chief exports were—Wheat, £897,720; flour, £408,115; undressed timber, £273,713; butter, £149,599; preserved milk and cream, £34,986; tallow, £73,924; dried fruits; sheep; leather; and soap.

Philippine Islands. Total Imports of Philippine Islands Origin, £170,135. Chief items were—Flax and hemp, £108,659; timber, £41,826; and tobacco and cigars.

Total Exports to Philippine Islands, £523,618. Principal items were—Frozen meats, £118,884; flour, £145,127; coal, £160,088; butter; bacon and ham; fodder; and onions.

Spain. Total Imports of Spanish Origin, £153,009. Chief items were—Corks, &c., £69,110; edible nuts, £31,840; liquorice; raisins; quicksilver; and wine.

Total Exports to Spain, £317,034. Chief items were—Silver and silver-lead concentrates, £202,174; wheat, £111,760.

Germany. Trade with Germany was suspended on the outbreak of war, and importation of German goods, except by permits granted by the Minister for Trade and Customs, was not permitted until the 1st August, 1922. Imports from Germany during 1923–24 were valued at £1,368,904. Chief items were—Apparel and textiles, £271,909; machinery and metal manufactures, £319,497; pianos, £262,085; paper and stationery,

£47,440; toys, £58,082; timepieces; fancy goods; fertilizers; and musical instruments. Exports to Germany amounted to £4,402,913. Of this total £4,388,629 was the produce of Australia. Chief exports were—Beef, £65,054; hides and skins, £136,675; wool, £3,576,436; silver and silver-lead ore and concentrates, £237,360; pig-lead, £84,495; and zinc—bars, blocks, &c., £105,850.

Egypt. *Total Imports of Egyptian Origin*, £16,814. Chief items were—Gums and resins, £8,213; and cigarettes, £1,898.

Total Exports to Egypt, £2,321,083. Principal items were—Flour, £1,831,045; wheat, £310,300; frozen meat, £66,225; undressed timber, £55,666; butter; and horses.

Russia. *Total Imports of Russian Origin*, £33,556. Chief items were—Hair and fibre; furs; and drugs.

Total Exports to Russia, £46.

Hong Kong. *Total Imports of Hong Kong Origin*, £2,685. Chief items were—Cigars; cordage; and bamboo and wicker articles.

Total Exports to Hong Kong, £776,998. Chief items were—Flour, £126,273; fish, £31,349; sandalwood, £222,300; butter, £34,968; preserved milk and cream, £40,310; pig lead, £63,865; leather and manufactures thereof, £154,755; jams and jellies; bacon and ham; frozen meat; and tallow.

6. Imports—States, and Total.—Imports are recorded at the port of landing and are credited to the State in which the port is situated. Records are not obtainable of interstate trade and the State totals represent, therefore, the value of overseas goods consigned to the various States. They do not, moreover, represent the consumption within each State. Figures for the last five years are given hereunder.

IMPORTS.—STATES, AND TOTAL, 1919-20 TO 1923-24.

State.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
	£	£	£	£	£
New South Wales	44,691,959	72,466,306	43,321,478	55,010,083	58,225,180
Victoria ..	33,788,287	57,608,777	36,352,056	46,729,100	49,592,643
Queensland ..	7,218,694	11,840,442	8,639,446	10,782,906	11,605,668
South Australia ..	7,473,893	12,381,973	9,047,242	10,846,619	12,700,321
Western Australia	4,959,062	7,219,538	4,308,141	6,788,165	6,662,729
Tasmania ..	813,341	2,264,933	1,385,958	1,588,158	1,817,320
Northern Territory	29,056	19,857	12,115	12,804	14,432
Total ..	98,974,292	163,801,826	103,066,436	131,757,835	140,618,293

7. Exports—States, and Total.—The following table gives the value of exports shipped from each State during the last five years. It must be noted that the value of goods transferred from one State to another for shipment to overseas countries is shown as an export from the State from which the goods were finally despatched.

EXPORTS.—STATES, AND TOTAL, 1919-20 TO 1923-24.

State.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
	£	£	£	£	£
New South Wales	55,017,065	52,601,798	48,012,511	42,581,874	43,146,722
Victoria ..	43,124,940	34,871,961	34,644,182	33,768,701	29,612,548
Queensland ..	14,403,922	15,171,884	17,573,103	15,782,072	14,628,305
South Australia ..	20,530,355	17,773,919	14,747,260	13,583,003	16,912,932
Western Australia	14,459,097	10,395,015	10,797,000	9,679,496	12,412,625
Tasmania ..	2,010,503	1,329,583	2,067,443	2,460,374	2,766,032
Northern Territory	277,627	14,752	5,036	14,627	8,000
Total ..	149,823,509	132,158,912	127,846,535	117,870,147	119,487,164

8. Trade of Principal Ports.—The following table gives the value of Imports received at, and Exports despatched from, the principal ports of Australia during 1922-23 and 1923-24.

OVERSEA TRADE.—PRINCIPAL PORTS, 1922-23 AND 1923-24.

Port.	1922-23.			1923-24.		
	Imports.	Exports.	Total.	Imports.	Exports.	Total.
	£	£	£	£	£	£
<i>New South Wales.</i>						
Sydney ..	53,362,111	40,573,690	93,935,801	56,691,354	40,916,746	97,608,100
Newcastle ..	1,614,584	1,916,482	3,531,066	1,496,109	2,124,501	3,620,610
Other Ports ..	33,388	91,702	125,090	37,717	105,475	143,192
Total ..	55,010,083	42,581,874	97,591,957	58,225,180	43,146,722	101,371,902
<i>Victoria.</i>						
Melbourne ..	46,294,074	30,593,080	76,887,154	48,967,249	26,581,946	75,549,195
Geelong ..	388,991	2,011,441	2,400,432	522,075	2,226,626	2,748,701
Other Ports ..	46,035	1,164,180	1,210,215	103,319	803,976	907,295
Total ..	46,729,100	33,768,701	80,497,801	49,592,643	29,612,548	79,205,191
<i>Queensland.</i>						
Brisbane ..	9,178,849	13,194,617	22,373,466	10,012,563	12,568,268	22,580,831
Rockhampton ..	511,017	833,913	1,344,930	431,849	480,448	912,297
Townsville ..	634,355	1,202,142	1,836,497	677,513	833,859	1,511,372
Other Ports ..	458,685	551,400	1,010,085	483,743	745,730	1,229,473
Total ..	10,782,906	15,782,072	26,564,978	11,605,668	14,628,305	26,233,973
<i>South Australia.</i>						
Port Adelaide, including Adelaide	10,711,752	9,400,065	20,111,817	12,470,826	10,607,980	23,078,806
Port Pirie ..	107,215	2,480,671	2,587,886	165,841	3,242,547	3,408,388
Wallaroo ..	27,652	1,186,131	1,213,783	63,654	2,073,163	2,136,817
Other Ports ..	..	516,136	516,136	..	989,242	989,242
Total ..	10,846,619	13,583,003	24,429,622	12,700,321	16,912,932	29,613,253
<i>Western Australia.</i>						
Fremantle (Perth)	6,574,467	7,354,549	13,929,016	6,468,590	9,713,068	16,181,658
Bunbury ..	34,720	829,264	863,984	37,144	1,126,976	1,164,120
Other Ports ..	178,978	1,495,683	1,674,661	156,995	1,572,581	1,729,576
Total ..	6,788,165	9,679,496	16,467,661	6,662,729	12,412,625	19,075,354
<i>Tasmania.</i>						
Hobart ..	925,021	1,589,049	2,514,070	1,068,772	1,961,998	3,030,770
Launceston ..	620,810	731,826	1,352,636	679,253	643,630	1,322,883
Other Ports ..	42,327	139,499	181,826	69,295	160,404	229,699
Total ..	1,588,158	2,460,374	4,048,532	1,817,320	2,766,032	4,583,352
<i>Northern Territory.</i>						
Port Darwin ..	12,804	14,627	27,431	14,432	8,000	22,432
Grand Total	131,757,835	117,870,147	249,627,982	140,618,293	119,487,164	260,105,457

§ 6. Exports to Eastern Countries.

1. Principal Articles Exported.—The following table shows the value of exports from Australia to Eastern countries during the last five years. The principal countries concerned in this trade are China, India and Ceylon, Japan, Netherlands East Indies and Timor (Portuguese), Philippine Islands, Malaya (British), and Hong Kong. The particulars given in the tables apply to these countries only.

EXPORTS FROM AUSTRALIA TO EASTERN COUNTRIES.—PRINCIPAL COMMODITIES, 1919-20 TO 1923-24.

Article.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
	£	£	£	£	£
Antimony	1,099	160	683	298	.
Biscuits	165,584	127,573	89,187	62,197	62,371
Butter	1,066,694	700,283	760,581	780,325	678,384
Cheese	61,862	30,104	19,036	11,527	10,235
Coal	247,147	863,165	422,323	397,352	357,230
Concentrates—Zinc	37,310	.	.	.	52
Copper	729,041	212,466	4,239	22,350	51,546
Grain and Pulse—					
Wheat	2,389,191	13,881	6,243,878	936,596	3,996,125
Flour	4,057,560	628,274	1,413,859	1,353,990	1,618,877
Other (prepared and unprepared)	210,079	109,465	47,693	9,882	33,864
Hay, chaff, and compressed fodder	36,190	24,659	22,110	18,576	21,272
Horses	121,857	154,235	40,382	82,834	21,713
Iron and Steel (unmanufactured)	301,612	67,961	1,527	4,472	618
Jams and jellies	128,688	158,092	81,299	59,613	67,377
Lead, Pig	580,724	32,701	347,963	644,848	533,770
Leather	346,510	282,738	217,185	242,681	366,578
Meats	526,277	587,907	545,659	397,006	426,174
Milk and cream	901,343	944,021	1,305,277	1,140,775	1,002,637
Pearl shell and trochus shell	209,657	43,880	50,779	56,531	37,300
Sandalwood	266,945	194,591	75,556	110,822	357,025
Skins, hoofs, horns, bones, sinews, tallow	947,271	439,270	601,077	523,619	648,012
Sulphate of ammonia	204,759	126,639	83,346	47,249	34,053
Tin ore .. .. .	.	2,735	.	.	.
Timber (undressed)	29,834	151,059	182,032	87,161	195,742
Wool	2,014,820	2,161,707	4,535,541	6,124,687	6,343,014
Other merchandise	1,755,816	1,672,567	1,589,522	1,338,978	1,439,569
Total merchandise	17,337,870	9,730,133	18,676,734	14,504,648	18,303,648
Specie and gold and silver bullion	6,232,767	2,192,714	2,615,173	3,284,263	3,307,936
Total exports	23,570,637	11,922,847	21,291,907	17,788,911	21,611,584

2. Destination of Exports.—The next table shows the destination of the merchandise exported to Eastern countries during the last five years.

EXPORTS FROM AUSTRALIA OF MERCHANDISE TO PRINCIPAL EASTERN COUNTRIES.—DESTINATION, 1919-20 TO 1923-24.

Country.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
	£	£	£	£	£
China	406,850	328,087	371,836	244,810	1,589,414
East Indies	2,878,615	2,372,881	2,262,758	1,865,660	1,603,092
Hong Kong	1,406,924	668,713	536,596	501,874	776,998
India and Ceylon	1,571,885	1,229,252	5,158,346	711,432	739,712
Japan	7,229,424	2,853,406	7,952,547	9,308,960	11,555,484
Malaya (British)	2,782,812	1,858,924	1,829,588	1,303,264	1,514,430
Philippine Islands	1,061,360	420,870	565,093	568,648	523,618
Total	17,337,870	9,730,133	18,676,734	14,504,648	18,303,648

3. *Chief Exports to Eastern Countries.*—The series of tables given hereunder shows the value of each of the principal articles exported to the countries specified during each of the last five years.

BUTTER.

Country.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
	£	£	£	£	£
China	89,217	91,173	88,358	43,123	61,571
East Indies	564,585	374,999	461,645	503,267	439,086
Hong Kong	66,197	62,127	42,116	44,411	34,968
India and Ceylon	38,485	35,922	19,237	26,150	24,060
Japan	55,126	12,204	36,721	30,358	19,676
Malaya (British)	162,044	78,856	76,751	98,877	67,523
Philippine Islands	91,040	45,002	35,753	34,139	31,500
Total	1,066,694	700,283	760,581	780,325	678,384

The exports of butter given above for the year 1923-24 were shipped from the several States as follows:—New South Wales, £107,773; Victoria, £530,755; Queensland, £38,677; South Australia, £1,158; Western Australia, £21.

COAL.

Country.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
	£	£	£	£	£
China .. ..	..	10,251	..	..	..
East Indies	73,303	422,213	219,919	76,519	101,369
Hong Kong	2	13,758	4,293	2,259	..
India and Ceylon	15,258	105,488	65,643	118,912	18,860
Japan	3,473	7,639	2,502	889	..
Malaya (British)	98,368	192,328	70,803	48,065	76,913
Philippine Islands	56,743	111,488	59,163	150,988	160,088
Total	247,147	863,165	422,323	397,632	357,230

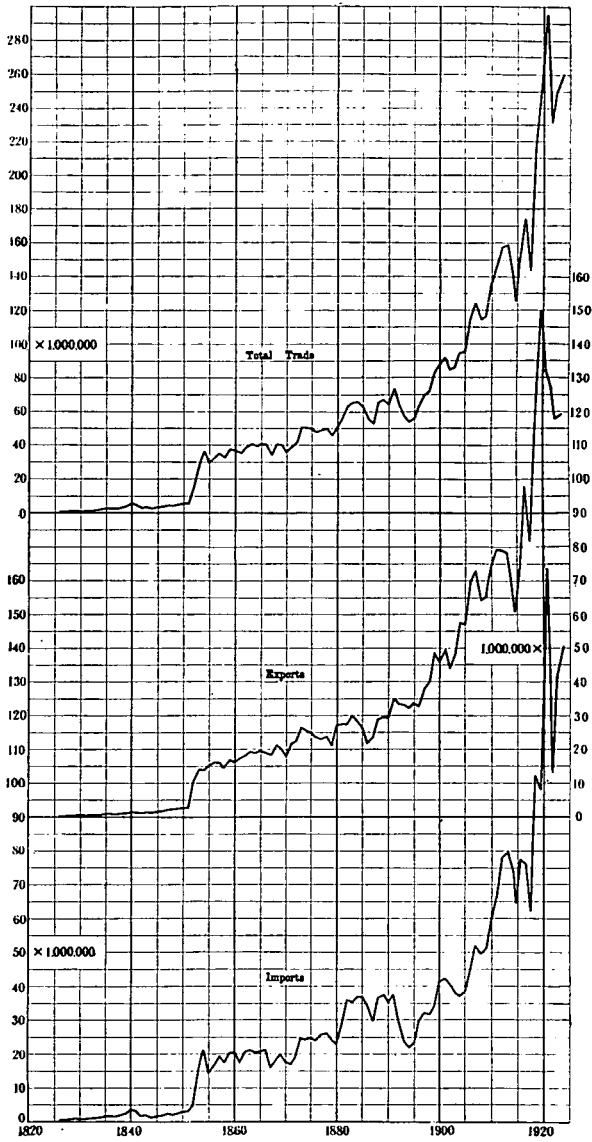
The exports of coal are chiefly from New South Wales.

COPPER.

Country.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
	£	£	£	£	£
China	59,981	16,954	4,125	..	..
East Indies	1,848	2	..	..	..
Hong Kong .. ..	..	..	..	..	150
India and Ceylon	276,840	195,510	..	22,350	51,396
Japan	390,372	..	..	..	..
Malaya (British) .. ..	..	..	114	..	..
Total	729,041	212,466	4,239	22,350	51,546

The copper exported to the East during 1923-24 was shipped from—New South Wales, £29,602; Queensland, £150; South Australia, £21,794.

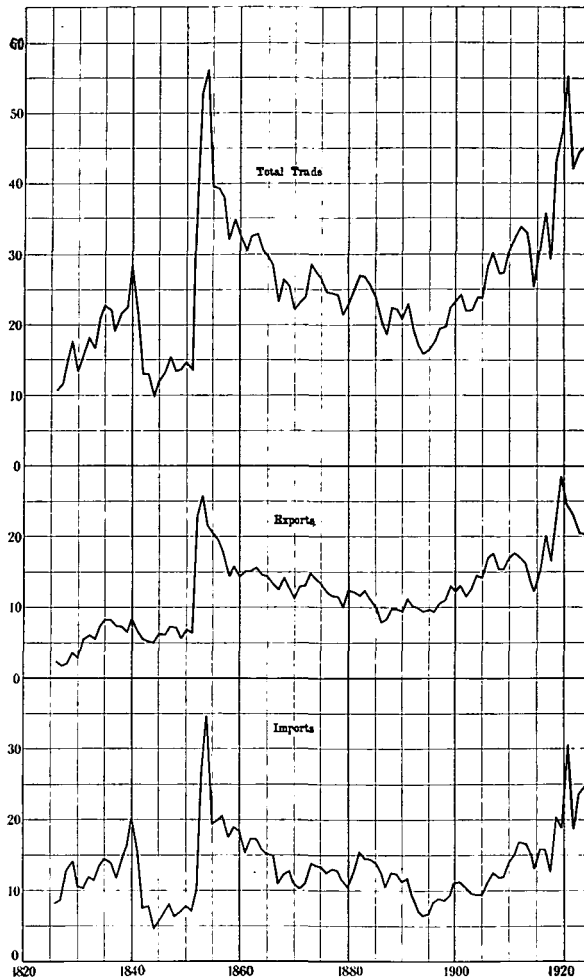
VALUES OF TOTAL TRADE, EXPORTS, AND IMPORTS, AUSTRALIA, 1826 TO 1923-24.



(See page 216.)

EXPLANATION.—The base of each square represents an interval of five years, and the vertical height five million pounds sterling for imports and exports, and ten million pounds sterling for total trade.

VALUES PER HEAD OF POPULATION OF TOTAL TRADE, EXPORTS, AND IMPORTS
AUSTRALIA, 1826 TO 1923-24.



(See page 216.)

EXPLANATION.—The base of each square represents an interval of five years, and the vertical height £5 per head of the population.

GRAIN AND PULSE.—WHEAT.

Country.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
	£	£	£	£	£
China .. ..	..	..	34,150	10,003	1,014,864
East Indies	57,716	173	7	..	28
Hong Kong	6	..	..	..	..
India and Ceylon	402,662	10,306	4,248,575	296	268
Japan	1,924,723	3,376	1,961,063	976,271	2,980,952
Malaya (British)	4,084	..	83	7	13
Philippine Islands .. ..	..	26	..	19	..
Total	2,389,191	13,881	6,243,878	986,596	3,996,125

The exports of wheat given for the year 1923-24 were shipped from the following States :—New South Wales, £185,559 ; Victoria, £1,142,148 ; South Australia, £1,906,883 ; Western Australia, £760,835.

GRAIN AND PULSE.—FLOUR.

Country.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
	£	£	£	£	£
China	20,183	1,440	63,388	3,140	128,498
East Indies	802,968	345,561	591,093	628,414	559,149
Hong Kong	591,734	9,364	124,498	71,891	126,273
India and Ceylon	174,562	11,768	94,315	98,828	104,747
Japan	464,922	8,603	83,260	19,337	162,048
Malaya (British)	1,319,493	186,268	301,390	404,952	393,035
Philippine Islands	683,698	65,270	155,915	127,428	145,127
Total	4,057,560	628,274	1,413,859	1,353,990	1,618,877

The flour exported during 1923-24 as above, was shipped from the several States as follows :—New South Wales, £737,560 ; Victoria, £617,401 ; South Australia, £69,109 ; Western Australia, £194,807.

GRAIN AND PULSE, OTHER THAN WHEAT AND FLOUR.

Country.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
	£	£	£	£	£
China	474	3,365	423	120	161
East Indies	67,689	65,209	5,211	3,130	3,443
Hong Kong	6,760	5,426	1,208	514	303
India and Ceylon	17,222	6,804	6,802	3,035	2,454
Japan	106,499	22,346	10	11	23,990
Malaya (British)	9,109	3,861	33,857	2,976	3,506
Philippine Islands	2,326	2,454	182	96	7
Total	210,079	109,465	47,693	9,882	33,864

The exports given above for 1923-24 were shipped from the following States :—New South Wales, £3,105 ; Victoria, £12,800 ; Queensland, £23 ; South Australia, £14,339 ; Western Australia, £3,597.

HAY AND CHAFF, AND COMPRESSED FODDER.

Country.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
	£	£	£	£	£
China .. ..	..	65	44	42	104
East Indies	3,420	2,413	2,998	1,738	1,916
Hong Kong	1,191	1,783	1,103	953	850
India and Ceylon	13,881	10,547	4,514	4,651	2,986
Japan	67	540	..	26	..
Malaya (British)	5,030	3,328	4,550	5,129	3,946
Philippine Islands	12,601	5,983	8,901	6,037	11,470
Total	36,190	24,659	22,110	18,576	21,272

The exports given above for the year 1923-24 were shipped from the several States as follows:—New South Wales, £188; Victoria, £17,757; Queensland, £158; Western Australia, £3,169.

HORSES.

Country.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
	£	£	£	£	£
China	250	140	..	110	140
East Indies	14,464	15,375	6,163	4,555	2,480
Hong Kong	50	..	..	..	100
India and Ceylon	86,801	128,611	26,724	71,274	9,726
Japan	1,770	3,025	2,425	1,260	3,596
Malaya (British)	15,192	6,406	5,070	5,285	4,380
Philippine Islands	3,330	678	..	350	1,291
Total	121,857	154,235	40,382	82,834	21,713

The value of horses exported to the above countries from each State during 1923-24 was as follows:—New South Wales, £10,472; Victoria, £9,746; Queensland, £590; Western Australia, £905.

LEAD, PIG.

Country.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
	£	£	£	£	£
China	30,698	..	223	15,196	49,714
East Indies	463	128	313	..	..
Hong Kong	120,427	347	39,695	67,512	63,865
Japan	428,796	32,200	307,732	562,140	419,988
Malaya (British) .. ..	..	26	..	..	..
Philippine Islands	340	..	..	..	203
Total	580,724	32,701	347,963	644,848	533,770

The exports of pig lead in 1923-24 were shipped from New South Wales, £418,462; South Australia, £115,308.

MEATS.—PRESERVED BY COLD PROCESS.

Country.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
	£	£	£	£	£
China .. ..	..	..	5	1,416	..
East Indies	1,637	7,600	14,566	17,028	8,539
Hong Kong	21,213	31,599	20,961	21,720	36,263
India and Ceylon	25,066	34,747	16,883	20,476	21,732
Japan	1,019	1,303	4,023	5,813	23,067
Malaya (British)	104,633	130,963	89,542	77,026	64,389
Philippine Islands	88,481	73,691	148,310	80,649	118,884
Total	242,049	279,903	294,290	224,128	272,874

The exports to the above-mentioned Eastern countries during 1923-24 of meats preserved by cold process were shipped from the following States :—New South Wales, £86,042 ; Victoria, £7,336 ; Queensland, £176,564 ; Western Australia, £2,932.

MEATS.—OTHER THAN MEATS PRESERVED BY COLD PROCESS.

Country.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
	£	£	£	£	£
China	14,972	16,115	5,193	5,621	3,757
East Indies	73,454	114,501	81,683	75,409	66,459
Hong Kong	28,753	23,082	13,303	9,410	11,126
India and Ceylon	48,450	50,987	80,220	26,229	10,048
Japan	3,312	2,460	1,619	2,251	17,611
Malaya (British)	81,698	51,982	45,529	28,789	24,047
Philippine Islands	33,589	48,877	23,822	25,168	20,252
Total	284,228	308,004	251,369	172,877	153,300

The exports given above for the year 1923-24 were shipped from the following States :—New South Wales, £53,437 ; Victoria, £26,325 ; Queensland, £73,169 ; South Australia, £268 ; Western Australia, £101.

SANDALWOOD.

Country.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
	£	£	£	£	£
China	18,307	39,798	7,611	30,876	83,415
East Indies	115	96	66	3	..
Hong Kong	174,659	111,730	57,714	66,460	222,300
India and Ceylon	1,860	7,736	6,180	8,161	6,192
Japan	482	40	50	..	..
Malaya (British)	71,522	35,191	3,935	5,322	45,118
Total	266,945	194,591	75,556	110,822	357,025

The exports of sandalwood in 1923-24 were shipped from Queensland, £8,073 ; Western Australia, £348,713 ; Northern Territory, £239.

SKINS, HOOFS, HORNS, BONES, SINEWS, AND TALLOW.

Country.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
	£	£	£	£	£
China	1,742	5,268	31,161	14,522	39,374
East Indies .. ..	..	821	4,230	4,040	3,315
Hong Kong	4,633	11,728	10,289	8,369	17,018
India and Ceylon	167,579	75,167	65,883	65,934	48,244
Japan	772,881	345,460	488,554	424,462	533,498
Malaya (British)	146	709	960	2,170	6,489
Philippine Islands	290	117	..	4,122	74
Total	947,271	439,270	601,077	523,619	648,012

The above exports of skins, etc., in 1923-24 were shipped from the several States as follows :—New South Wales, £314,214 ; Victoria, £102,717 ; Queensland, £194,444 ; South Australia, £34,626 ; Western Australia, £745 ; Northern Territory, £1,266.

TIMBER, UNDRESSED.

Country.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
	£	£	£	£	£
China	5,996	39,682	19,796	27,418	36,951
East Indies .. ..	..	3,674	37	16	53
Hong Kong	2,969	4,954	6,580	3,883	..
India and Ceylon	13,948	91,966	153,117	47,860	156,638
Japan	6,921	8,380	2,478	2,169	2,100
Malaya (British) .. ..	..	..	24	5,045	..
Philippine Islands .. ..	..	2,403	..	770	..
Total	29,834	151,059	182,032	87,161	195,742

The above exports of undressed timber during 1923-24 from the several States were shipped as follows :—New South Wales, £2,133 ; Queensland, £2 ; Western Australia, £193,607.

WOOL.

Country.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
	£	£	£	£	£
China .. ..	..	..	46,626	14,093	753
India and Ceylon .. ..	..	45,198	50,243	11,487	123,550
Japan	2,010,732	2,107,473	4,438,672	6,095,616	6,212,881
Philippine Islands	4,088	9,036	..	3,491	5,830
Total	2,014,820	2,161,707	4,535,541	6,124,687	6,343,014

The value of wool exported to the East by each State during 1923-24 was as follows :—New South Wales, £3,613,634 ; Victoria, £1,532,201 ; Queensland, £1,193,426 ; South Australia, £668 ; Western Australia, £2,195 ; Tasmania, £890.

§ 7. Classified Summary of Australian Trade.

1. Imports.—The following table shows the value of imports into Australia during each of the last five years, arranged in classified order in accordance with the statistical classification which came into operation on 1st July, 1922 :—

AUSTRALIAN IMPORTS.—IN CLASSES, 1919-20 TO 1923-24.

Classes.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
	£	£	£	£	£
I. Animal foodstuffs, etc. ..	1,459,212	1,224,099	1,535,308	1,770,241	2,204,883
II. Vegetable foodstuffs; non-alcoholic beverages, etc. ..	11,800,877	10,728,551	4,450,028	5,577,049	6,548,204
III. Alcoholic liquors, etc. ..	1,308,686	2,000,248	1,583,382	1,864,738	2,102,219
IV. Tobacco, etc. ..	2,743,535	3,841,548	2,467,033	2,232,910	3,213,264
V. Live animals ..	117,519	76,882	96,934	113,808	172,349
VI. Animal substances, etc. ..	1,072,163	716,523	703,196	960,784	1,398,676
VII. Vegetable substances, etc. ..	3,462,396	3,829,032	2,891,040	2,854,308	2,844,905
VIII. Apparel, textiles, etc. ..	27,630,763	52,322,707	34,225,043	44,570,027	38,482,446
IX. Oils, fats, and waxes ..	4,751,906	8,428,750	5,130,286	5,987,331	7,383,879
X. Paints and varnishes ..	459,136	627,333	426,039	564,038	635,814
XI. Stones and minerals, etc. ..	245,824	268,957	210,022	339,222	698,248
XII. Metals, metal manufactures, and machinery ..	23,352,444	42,220,826	25,096,571	35,203,294	43,751,850
XIII. Rubber and leather, etc. ..	2,125,284	3,093,611	1,583,611	2,643,493	3,497,381
XIV. Wood and wicker, etc. ..	2,876,247	5,722,464	2,884,550	4,767,841	6,218,902
XV. Earthenware, etc. ..	1,237,558	3,184,438	1,886,934	2,205,799	2,441,238
XVI. Paper and stationery ..	4,156,626	8,978,897	4,855,564	6,275,837	6,443,226
XVII. Jewellery, etc. ..	2,065,318	2,609,446	1,762,373	2,405,779	2,477,695
XVIII. Optical, surgical, and scientific instruments ..	991,041	1,125,158	943,688	1,189,254	1,472,669
XIX. Drugs, chemicals, etc. ..	3,652,671	5,591,325	3,556,742	3,895,988	3,878,526
XX. Miscellaneous ..	3,374,917	7,185,721	6,702,306	6,281,525	4,669,017
XXI. Gold and silver, and bronze specie ..	60,149	25,810	74,286	53,964	82,852
Total ..	98,974,292	163,801,826	103,066,436	131,757,835	140,618,293

2. Exports.—In the following tables the exports from Australia are shown in classes according to the same classification, distinguishing (a) Australian Produce; (b) Other Produce (Re-exports); and (c) Total Exports.

EXPORTS FROM AUSTRALIA.—IN CLASSES, 1919-20 TO 1923-24.

Classes.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
	£	£	£	£	£
(a) AUSTRALIAN PRODUCE.					
I. Animal foodstuffs, etc. ..	18,148,656	20,980,389	16,355,946	15,498,298	9,717,734
II. Vegetable foodstuffs; non-alcoholic beverages, etc. ..	36,021,644	43,612,176	38,722,009	16,588,345	23,550,639
III. Alcoholic liquors, etc. ..	438,837	611,300	237,437	222,457	271,380
IV. Tobacco, etc. ..	276,735	380,157	451,940	620,430	380,127
V. Live animals ..	245,528	380,296	177,569	237,674	125,873
VI. Animal substances, etc. ..	62,068,711	37,741,985	51,552,436	64,284,144	63,047,851
VII. Vegetable substances, etc. ..	499,651	356,553	234,546	441,745	792,521
VIII. Apparel, textiles, etc. ..	1,441,267	1,163,633	318,775	171,619	260,437
IX. Oils, fats, and waxes ..	3,629,903	1,731,162	1,596,965	1,775,599	969,655
X. Paints and varnishes ..	230,555	179,834	143,983	59,462	39,325
XI. Stones and minerals, etc. ..	1,531,692	2,869,590	1,934,846	3,171,607	3,371,002
XII. Metals, metal manufactures, and machinery ..	7,895,361	5,467,373	3,912,258	4,895,991	5,905,199
XIII. Rubber and leather, etc. ..	2,644,509	1,603,105	891,039	911,652	945,034
XIV. Wood and wicker, etc. ..	559,026	1,471,550	1,242,562	1,116,025	1,334,668
XV. Earthenware, etc. ..	113,315	219,952	128,173	79,417	81,375
XVI. Paper and stationery ..	147,178	194,732	148,604	141,309	168,359
XVII. Jewellery, etc. ..	350,694	259,395	84,321	91,123	151,130
XVIII. Optical, surgical, and scientific instruments ..	62,658	67,564	61,076	58,336	72,990
XIX. Drugs, chemicals, etc. ..	966,262	914,950	501,326	505,228	501,598
XX. Miscellaneous ..	693,752	760,025	514,832	536,272	582,783
XXI. Gold and silver; and bronze specie ..	6,573,390	5,464,938	4,336,569	3,344,576	3,892,865
Total ..	144,569,324	126,430,681	123,487,512	114,751,309	116,162,545

EXPORTS FROM AUSTRALIA.—IN CLASSES, 1919-20 TO 1923-24—*continued.*

Classes.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
(b) OTHER PRODUCE.—RE-EXPORTS.					
	£	£	£	£	£
I. Animal foodstuffs, etc. ..	70,793	71,200	39,822	77,391	61,228
II. Vegetable foodstuffs; non-alcoholic beverages, etc. ..	676,714	474,283	427,943	435,099	544,313
III. Alcoholic liquors, etc. ..	176,524	155,548	102,880	77,246	78,268
IV. Tobacco, etc. ..	136,348	117,506	61,365	63,063	57,358
V. Live animals ..	24,208	3,793	9,092	12,977	10,517
VI. Animal substances, etc. ..	121,381	19,898	35,803	37,865	22,448
VII. Vegetable substances, etc. ..	605,577	1,078,137	1,077,326	615,748	546,820
VIII. Apparel, textiles, etc. ..	944,079	800,525	964,764	616,394	411,417
IX. Oils, fats, and waxes ..	178,321	272,633	243,834	94,646	126,056
X. Paints and varnishes ..	11,760	8,102	5,341	7,200	4,794
XI. Stones and minerals, etc. ..	3,982	7,175	2,015	4,583	2,957
XII. Metals, metal manufactures, and machinery ..	559,023	663,110	473,846	417,070	427,224
XIII. Rubber and leather, etc. ..	154,340	107,800	226,773	76,847	49,142
XIV. Wood and wicker, etc. ..	52,082	106,821	76,766	52,075	56,638
XV. Earthenware, etc. ..	35,693	30,354	14,129	20,140	16,917
XVI. Paper and stationery ..	96,939	114,537	99,575	100,718	155,064
XVII. Jewellery, etc. ..	85,888	173,277	132,914	103,866	51,679
XVIII. Optical, surgical, and scientific instruments ..	100,147	126,795	85,883	84,578	104,917
XIX. Drugs, chemicals, etc. ..	150,662	129,406	101,291	73,940	69,000
XX. Miscellaneous ..	993,509	1,252,056	176,102	145,892	527,585
XXI. Gold and silver; and bronze specie ..	76,125	15,275	1,550	600	277
Total ..	5,254,185	5,728,231	4,359,023	3,118,838	3,324,619

(c) TOTAL EXPORTS.—AUSTRALIAN PRODUCE AND RE-EXPORTS.

	£	£	£	£	£
I. Animal foodstuffs, etc. ..	18,219,449	21,051,589	16,395,768	15,575,689	9,778,962
II. Vegetable foodstuffs; non-alcoholic beverages, etc. ..	36,698,358	44,086,459	39,149,952	17,024,344	24,094,952
III. Alcoholic liquors, etc. ..	615,361	766,848	340,326	299,703	349,648
IV. Tobacco, etc. ..	413,083	486,663	513,305	683,493	437,485
V. Live animals ..	269,826	390,089	136,661	250,651	136,390
VI. Animal substances, etc. ..	62,220,092	37,761,883	51,568,239	64,322,009	63,070,299
VII. Vegetable substances, etc. ..	1,105,228	1,434,692	1,312,172	1,057,493	1,339,341
VIII. Apparel, textiles, etc. ..	2,385,346	1,969,178	1,283,539	785,013	671,854
IX. Oils, fats, and waxes ..	3,308,224	2,003,795	1,840,799	1,870,245	1,095,711
X. Paints and varnishes ..	242,315	187,936	89,324	66,662	44,119
XI. Stones and minerals, etc. ..	1,535,674	2,876,765	1,936,861	3,176,190	3,373,959
XII. Metals, metal manufactures, and machinery ..	8,454,384	6,130,483	4,386,104	5,313,061	6,332,423
XIII. Rubber and leather, etc. ..	2,798,849	1,710,905	1,117,812	988,490	994,176
XIV. Wood and wicker, etc. ..	611,108	1,578,371	1,319,328	1,168,100	1,391,306
XV. Earthenware, etc. ..	149,008	250,306	142,302	99,557	98,292
XVI. Paper and stationery ..	244,117	309,269	248,179	242,027	323,423
XVII. Jewellery, etc. ..	436,582	432,672	217,235	194,989	202,809
XVIII. Optical, surgical, and scientific instruments ..	162,805	194,359	146,959	142,914	177,207
XIX. Drugs, chemicals, etc. ..	1,116,924	1,044,356	602,617	579,168	570,598
XX. Miscellaneous ..	1,687,261	2,012,081	690,934	682,164	1,110,368
XXI. Gold and silver; and bronze specie ..	6,649,515	5,480,213	4,338,119	3,345,176	3,893,142
Total ..	149,823,509	132,158,912	127,846,535	117,870,147	119,487,164

3. Imports of Merchandise, Specie and Bullion.—The following table gives the value of imports into Australia during each of the last five years, grouped under the headings—Merchandise, and Specie and Bullion. The imports of merchandise are shown under the sub-headings of “free” and “dutiable” goods.

IMPORTS OF MERCHANDISE, SPECIE AND BULLION.—AUSTRALIA, 1919-20 TO 1923-24.

Year.	Merchandise.		Specie and Bullion.	Total Imports.
	Free Goods.	Dutiable Goods.		
	£	£	£	£
1919-20	38,443,794	60,484,412	46,086	98,974,292
1920-21	62,467,773	101,313,909	20,144	163,801,826
1921-22	38,400,193	64,622,939	43,304	103,066,436
1922-23	43,749,955	87,977,056	30,824	131,757,835
1923-24	43,092,594	97,463,907	61,792	140,618,293

4. Exports of Merchandise, Specie and Bullion.—The next table shows the value of exports from Australia during each of the last five years, grouped under the headings—Merchandise, and Specie and Bullion; giving the exports of Australian Produce and Other Produce separately.

EXPORTS OF MERCHANDISE, SPECIE AND BULLION.—AUSTRALIA, 1919-20 TO 1923-24.

Year.	Merchandise.		Specie and Bullion.		Total Exports.
	Australian Produce.	Other Produce.	Australian Produce.	Other Produce.	
	£	£	£	£	£
1919-20	138,011,233	5,178,060	6,558,091	76,125	149,823,509*
1920-21	120,997,216	5,712,956	5,433,465	15,275	132,158,912*
1921-22	119,160,362	4,357,473	4,327,150	1,550	127,846,535*
1922-23	111,450,970	3,118,238	3,300,339	600	117,870,147*
1923-24	112,350,326	3,324,342	3,812,219	277	119,487,164*

* Does not include the value of Ships' Stores. See later table.

5. Imports in Tariff Divisions.—In the following table the imports into Australia during the last five years have been classified in accordance with the sixteen divisions of the Customs Tariff 1921.

IMPORTS CLASSIFIED ACCORDING TO DIVISIONS OF THE CUSTOMS TARIFF OF 1921—AUSTRALIA, 1919-20 TO 1923-24.

Tariff Division.	Imports.				
	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
	£	£	£	£	£
I. Ale, Spirits, and Beverages ..	1,495,212	2,237,364	1,758,023	2,053,142	2,322,901
II. Tobacco and preparations thereof ..	2,743,535	3,841,548	2,467,033	2,232,910	3,213,264
III. Sugar ..	4,378,219	6,590,314	209,787	126,649	52,593
IV. Agricultural Products and Groceries ..	11,498,070	8,127,079	7,891,727	9,274,696	10,762,231
V. Textiles, Felts and Furs, and Manufactures thereof, and Attire ..	25,526,984	47,974,571	31,151,498	40,112,188	35,267,870
VI. Metals and Machinery ..	19,675,024	37,286,278	21,184,911	26,829,243	29,883,111
VII. Oils, Paints, and Varishes ..	5,113,381	9,457,198	5,711,960	6,673,295	8,123,183
VIII. Earthenware, Cement, China, Glass, and Stone ..	1,565,999	3,622,336	2,223,380	2,837,598	3,103,866
IX. Drugs and Chemicals ..	3,291,868	4,856,129	3,115,647	2,691,018	2,587,796
X. Wood, Wicker, and Cane ..	2,933,500	5,948,837	2,989,968	4,767,841	6,218,902
XI. Jewellery and Fancy Goods ..	2,679,264	3,139,672	2,332,226	2,857,037	3,196,898
XII. Hides, Leather, and Rubber ..	2,362,826	3,411,386	1,738,198	3,007,484	3,923,855
XIII. Paper and Stationery ..	4,156,626	8,978,897	4,839,613	6,259,063	6,387,522
XIV. Vehicles ..	3,974,069	5,984,764	4,061,656	8,335,452	13,807,297
XV. Musical Instruments ..	427,619	874,313	426,610	741,815	1,332,776
XVI. Miscellaneous ..	4,172,089	8,673,891	8,692,515	10,847,830	7,557,313
— Free Goods not specially mentioned in Tariff ..	2,933,921	2,777,105	2,228,380	2,079,750	2,812,123
Total Merchandise ..	98,928,206	163,781,682	103,023,132	131,727,011	140,556,501
Specie and Bullion ..	46,086	20,144	43,304	30,824	61,792
Grand Total ..	98,974,292	163,801,826	103,066,436	131,757,835	140,618,293

§ 8. Excise.

While of course it does not come under the heading of oversea trade, the accompanying information in regard to Excise has been inserted here for purpose of convenience. The following table shows, in detail, the quantities of spirits, beer and tobacco on which Excise Duty was paid in Australia during each of the five years, 1919-20 to 1923-24.

**QUANTITIES OF SPIRITS, BEER, AND TOBACCO ON WHICH EXCISE DUTY
WAS PAID—AUSTRALIA, 1919-20 TO 1923-24.**

Article.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
	proof gal.	proof gal.	proof gal.	proof gal.	proof gal.
Spirits—					
Brandy (Pure Australian Standard Brandy) ..	191,951	165,277	145,202	158,492	185,340
Brandy (Blended Wine Brandy, etc.) ..	14,321	15,479	11,123	14,016	13,815
Gin (Distilled from Barley, Malt, Grain, or Grape Wine, etc.) ..	85,647	66,792	50,212	54,503	54,870
Whisky (Australian Standard Malt Whisky) ..	201,083	171,244	136,349	143,190	148,088
Whisky (Australian Blended Whisky) ..	732	367	92	99	95
Rum (Australian Standard Rum) ..	498,378	454,993	448,213	468,952	520,516
Rum (Blended) ..	2,238	..	..	642	1,208
Liqueurs ..	..	80	101	635	138
Spirits, n.e.i. ..	4,925	4,909	1,054	2,756	2,035
Spirits for Industrial or Scientific Purposes ..	138,472	114,792	130,991	141,646	142,499
Spirits for Fortifying Wine ..	608,746	703,932	793,749	851,007	941,076
Spirits for making Vinegar ..	31,085	41,107	35,325	38,378	45,089
Spirits for Manufacture of Scents, &c.* ..	23,409	19,720	21,373	26,046	27,066
Methylated Spirits* ..	483,512	41,416	5	..	..
Amylic Alcohol and Fusel Oil ..	5	20	13	27	54
Total, Spirits ..	2,284,504	1,800,128	1,773,802	1,900,389	2,081,889
	gal.	gal.	gal.	gal.	gal.
Beer, n.e.i. ..	69,954,249	66,118,642	62,968,031	63,195,280	63,202,012
Beer, Brewed from Malt and Hops ..	..	..	..	..	..
Total, Beer ..	69,954,249	66,118,642	62,968,031	63,195,280	63,202,012
	lb.	lb.	lb.	lb.	lb.
Tobacco—Manufactured, n.e.i. ..	9,611,939	9,844,157	11,872,442	11,894,776	12,208,264
Tobacco—Hand-made ..	613,526	516,381	545,532	471,147	561,628
Tobacco—Uncovered ..	987,160	..	..	..	..
Tobacco—Fine-cut, suitable for Cigarettes ..	48,957	37,187	36,303	33,804	29,025
Total, Tobacco ..	11,261,582	10,397,725	12,454,277	12,399,727	12,798,917
Cigars—Machine-made ..	60,727	59,463	51,187	52,812	38,879
Cigars—Hand-made ..	506,544	456,634	473,840	434,258	409,597
Total, Cigars ..	567,271	516,097	525,027	487,070	448,476
Cigarettes—Machine-made ..	4,667,882	5,009,842	4,807,118	4,410,713	4,739,115
Cigarettes—Hand-made ..	47,438	48,943	57,497	42,448	30,321
Total, Cigarettes ..	4,715,320	5,058,785	4,864,615	4,453,161	4,769,436
Snuff ..	245	238	230	231	100

* Liquid gallons.

§ 9. Ships' Stores.

Prior to 1906 goods shipped in Australian ports on board oversea vessels as ships' stores were included in the general exports. From 1906, ships' stores have been specially recorded as such, and have been omitted from the export figures. The value of these stores shipped each year during the period 1906 to 1923-24, showing bunker coal separately, is given in the following table :—

VALUE OF STORES SHIPPED IN AUSTRALIAN PORTS ON OVERSEA VESSELS,
1906 TO 1923-24.

Period.	Bunker Coal.	All Stores (including Coal).	Period.	Bunker Coal.	All Stores (including Coal).
	£	£		£	£
1906	575,471	875,966	1915-16	719,510	1,544,872
1907	663,724	998,897	1916-17	748,852	1,676,116
1908	867,707	1,196,106	1917-18	632,910	1,389,291
1909	781,113	1,071,677	1918-19	857,507	1,765,367
1910	740,567	1,080,133	1919-20	1,487,872	2,688,371
1911	858,783	1,238,446	1920-21	2,027,133	3,560,648
1912	1,008,259	1,431,985	1921-22	2,178,101	3,152,604
1913	1,018,595	1,458,702	1922-23	1,988,890	2,887,399
1914 (1st six mths.)	533,288	771,581	1923-24	1,672,160	2,614,948
1914-15	829,875	1,587,757			

§ 10. Exports according to Industries.

1. *Classification.*—The following table gives an analysis of the exports of Australian produce according to the main classes of industry in which the goods were produced. In certain cases in which the produce has been subjected to some initial process of manufacture, opinions may differ in regard to its classification, but in preparing the tabulation the method adopted generally has been to credit to the primary industry those products in which the value of the primary element is appreciably the greater. Thus, such commodities as flour, jams and preserved fruits, chaff and prepared fodders, etc., have been treated as the produce of agriculture; butter, cheese, preserved milk, and bacon and hams have been credited to the dairying industry; canned meats, tallow and fellmongered skins have been credited to the pastoral industry, but leather has been classed as a product of manufacturing; minerals and metals which have been smelted or otherwise refined, but not further manufactured, have been included as the produce of mining; and sawn timber as the produce of forestry.

Increasing manufacturing activity in close proximity to the centres of primary production—in some instances by co-operative association of primary producers—has the effect of merging more closely the direct interests of primary and secondary production. Prominent cases of the kind referred to are the production of butter, preserved and dried milk, bacon and hams, canned and dehydrated fruit, jam, sugar, flax fibre, etc. As, therefore, no sharp distinction can be made in such cases between the primary and secondary industries, it follows that the values allocated to these divisions in the table must be taken as a general indication only of their relative importance in the export returns. While there is in the primary products some value due to factory processes, there is, on the other hand, in the manufactured products a considerable element of Australian primary produce in the raw materials from which these manufactured products were made. As the figures given are, however, on the same basis throughout the period covered by the table, they indicate, with reasonable accuracy, the variations in the relative importance of the several industrial groups.

EXPORTS OF AUSTRALIAN PRODUCE ACCORDING TO INDUSTRIAL ORIGIN.

VALUE OF EXPORTS AS RECORDED.

Industrial Group.	1913.(a)		1922-23.		1923-24.	
	£		£		£	
Agriculture	10,677,734	100	16,708,194	157	23,747,422	222
Pastoral	42,057,346	100	73,310,786	174	67,024,019	159
Dairy and Farmyard	3,854,734	100	7,985,754	207	6,318,361	164
Mines and Quarries	14,712,242	100	11,035,889	75	12,722,501	86
Fisheries	424,849	100	414,256	98	437,476	103
Forestry	1,106,549	100	1,181,656	107	1,648,709	149
Total Primary Produce	72,833,454	100	110,636,535	152	111,898,488	154
Manufacturing	2,304,693	100	4,114,774	179	4,264,057	185
Total	75,138,147	100	114,751,309	153	116,162,545	155

(a) Base year.

2. Effect of Price Changes.—If the effect of price changes be eliminated from the above figures by the application of the export price index-numbers, the relative quantitative results will be approximately as follows:—

AUSTRALIAN EXPORTS.—ELIMINATION OF PRICE CHANGES.

Industrial Group.	1913.(a)		1922-23.		1923-24.	
	£		£		£	
Agriculture	10,677,734	100	11,456,058	107	18,495,051	173
Pastoral	42,057,346	100	44,191,861	105	30,884,298	73
Dairy and Farmyard	3,854,734	100	4,865,034	126	3,978,621	103
Mines and Quarries	14,712,242	100	8,426,306	57	9,269,370	63
Fisheries	424,849	100	483,379	114	505,753	119
Forestry	1,106,549	100	724,054	65	973,839	88
Total Primary Produce	72,833,454	100	70,146,692	96	64,106,932	88
Manufacturing	2,304,693	100	1,912,959	83	2,160,110	94
Total	75,138,147	100	72,059,651	96	66,267,042	88

(a) Base year.

3. Relative Importance of Industrial Groups.—In the first of the two preceding tables the value of commodities in each industrial group of exports is that recorded at date of shipment from Australia, while in the second table the effect of price changes during the period has been taken into account. In the table showing exports according to recorded value the pastoral group was responsible for the highest proportion of exports during each year. In 1913 the value of commodities included in this group represented 55.97 per cent. of the total exports, as compared with 63.89 per cent. during the year 1922-23, and 57.69 per cent. during 1923-24. Wool constitutes the greater part of the exports in the pastoral group. The high price ruling for that commodity was responsible for the increased percentage during 1923-24, as the quantity exported was less than in 1913.

The value of minerals, etc., included in the mining group exceeded the value of items in the agricultural group during the year 1913, but, during the two later years the value of agricultural produce exported was in excess of mineral exports. According to value, the agricultural group now ranks next to the pastoral group. Wheat and flour are the two items of export mainly responsible for this position. The low percentage of the agricultural group on the total exports during 1922-23, as compared with that of the following year, was due to the comparatively small quantity of wheat exported.

The value of exports of dairy and farmyard produce increased during 1922-23, but declined considerably during 1923-24. Exports included in the fisheries and forestry groups have not varied to a marked extent, but an increase in 1923-24 over the returns for the preceding year occurred in the value of exports in the manufacturing group.

The recorded value of exports for all industrial groups shows an increase of 53 per cent. during 1922-23, and of 55 per cent. during 1923-24, as compared with the total value of exports during the year 1913. The effect of eliminating price changes during the period is shown in the second table. Higher prices of commodities in 1922-23 and 1923-24 tended to inflate the value of exports during these years. On the basis of prices ruling in 1913 the exports of 1922-23 were 4 per cent. less than those of 1913, while the exports during 1923-24 were 12 per cent. less than in 1913. The effect of eliminating price changes is particularly noticeable in the figures for the agricultural, pastoral, dairy produce, and manufacturing groups.

4. Australian Production and Exports according to Industry.—The following table shows the total value of Australian Production, and Australian Exports during the period of eight years, 1916-17 to 1923-24, classified according to industries, the proportion of each industrial group to total production and also to total exports, and in the last column the percentage exported of the production of each industrial group:—

VALUE OF AUSTRALIAN PRODUCTION AND EXPORTS, ACCORDING TO INDUSTRY, 1916-17 TO 1923-24.

Industrial Group.	Value of Production during Eight Years.	Percentage on Total Production.	Value of Exports during Eight Years.	Percentage on Total Exports.	Percentage Exported of the Production in each Industrial Group.
Agriculture	£1,000. 612,133	23.2	£1,000. 211,131	23.3	34.5
Pastoral	702,015	26.6	458,533	50.7	65.3
Dairy and Farmyard ..	314,509	11.9	64,051	7.1	20.4
Mining	176,772	6.7	112,219	12.4	63.5
Forestry and Fisheries ..	73,414	2.8	11,224	1.2	15.3
Total Primary Produce	1,878,843	71.2	857,158	94.7	45.6
Manufacturing	758,121	28.8	47,759	5.3	6.3
Total	2,636,964	100	904,917	100	34.3

The figures relating to value of production and value of exports are subject to the qualifications mentioned in *1 ante*. A period of eight years is embraced, and the values of production and of exports therein give a very fair index of the relative importance of the several industrial groups. Of the total production 71.2 per cent. was classified as primary produce and 28.8 per cent. as manufactured articles. The main contributing groups in the primary produce section were pastoral with 26.6 per cent., and agriculture with 23.2 per cent. of the total production.

Exports of primary produce represented 94·7 per cent. of the total exports. The pastoral group, with 50·7 per cent. of the total, shows the highest percentage, followed by the agricultural and mining groups with 23·3 per cent. and 12·4 per cent. respectively. Exports of goods classified in the manufacturing group represented only 5·3 per cent. of the total.

The figures in the last column of the table are of special interest, as they show the percentage exported of the production of each industrial group. Of the total primary production during the period 45·6 per cent. was exported. Over one-third of the agricultural production and approximately two-thirds of the pastoral production were sent abroad.

Sixty-four per cent. of the total production of the mining industry and 20 per cent. of the produce included in the dairy and farmyard group were exported.

The percentage of manufactured goods exported was comparatively small, only 6 per cent. of the production during the period being sent abroad.

§ 11. Movement of Specie and Bullion.

1. Imports and Exports.—The following tables show the value of gold and silver specie and bullion, and bronze specie imported and exported during the years 1919-20 to 1923-24 :—

AUSTRALIAN IMPORTS AND EXPORTS, SPECIE AND BULLION, 1919-20 TO 1923-24.

Items.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
IMPORTS.					
Gold—Specie ..	£ 19	£ 13	£ 7	£ 7	£ ..
Bullion ..	36,312	6,736	6,356	3,501	5,157
Total ..	36,331	6,749	6,363	3,508	5,157
Silver—Specie ..	8,152	10,882	34,877	24,300	55,172
Bullion ..	1,596	2,502	2,041	2,130	1,425
Total ..	9,748	13,384	36,918	26,430	56,597
Bronze—Specie ..	7	11	23	886	38
GRAND TOTAL ..	46,086	20,144	43,304	30,824	61,792
EXPORTS.					
Gold—Specie ..	£ 5,321,053	£ 5,303,423	£ 3,480,420	£ 2,219,998	£ 2,411,512
Bullion ..	226,154	796	200	5,907	385,755
Total ..	5,547,207	5,304,219	3,480,620	2,225,905	2,797,267
Silver—Specie ..	105,657	66,687	6,955	5,870	17,355
Bullion ..	979,307	77,319	841,085	1,069,159	997,874
Total ..	1,084,964	144,006	848,040	1,075,029	1,015,229
Bronze—Specie ..	2,045	515	40	5	..
Total—					
Australian Produce ..	6,558,091	5,433,465	4,327,150	3,300,339	3,812,219
Other Produce ..	76,125	15,275	1,550	600	277
GRAND TOTAL ..	6,634,216(a)	5,448,740(a)	4,328,700(a)	3,300,939(a)	3,812,496(a)

(a) Includes premium on gold exported.

2. Imports and Exports by Countries.—The next table shows the imports and exports of specie and bullion from and to various countries during the year 1923-24.

AUSTRALIAN IMPORTS AND EXPORTS—SPECIE AND BULLION BY COUNTRIES, 1923-24.

Country.	Imports.			Exports.		
	Specie.	Bullion.	Total.	Specie.	Bullion.	Total.
	£	£	£	£	£	£
Australia (a) ..	47,849	..	47,849	..	..	..
United Kingdom ..	5,990	2,053	8,043	7,123	104,812	111,935
India and Ceylon ..	..	..	..	1,994,539	919,821	2,914,360
Malaya (British) ..	..	..	..	34,790	..	34,790
New Zealand ..	1,367	..	1,367	..	482	482
Pacific Islands—						
Fiji ..	..	..	..	18	881	899
Norfolk Island ..	..	..	..	200	..	200
Pleasant Island (Nauru) ..	..	..	..	..	17	17
Solomon Islands ..	..	..	..	8,510	..	8,510
Territory of New Guinea ..	..	4,510	4,510	..	..	..
Total British Countries ..	55,206	6,563	61,769	2,045,180	1,026,013	3,071,193
China ..	..	..	..	..	357,616	357,616
Germany ..	..	10	10	..	..	..
Pacific Islands—						
New Caledonia ..	..	..	..	300	..	300
New Hebrides ..	..	..	..	2,867	..	2,867
United States of America ..	4	9	13	380,520	..	380,520
Total Foreign Countries ..	4	19	23	383,687	357,616	741,303
GRAND TOTAL ..	55,210	6,582	61,792	2,428,867	1,383,629	(b)3,812,496

(a) Australian Produce re-imported.

(b) Includes the premium on gold exported.

§ 12. Effect of Prices on Value of Exports.

1. General.—In comparing the value of exports from, and also imports into, any country for a series of years, the question naturally arises as to the extent to which any variation in the aggregate value is due to fluctuations in prices, or to increase or decrease of actual quantities, for, in aggregates expressed in value—the only possible method when the commodities differ—the two sources of variation are confused.

2. Methods of Computation.—The method of computation adopted consists in the taking of an annual average for an extended period of the quantities of all such articles of export as are recorded by quantity, and the application to the average quantities so obtained of the average prices in each year. The quantities used to produce the following results are the averages for 19½ years, viz., from 1st January, 1897, to 30th June, 1916, these being taken as representing the general quantitative composition or norm of the exports from Australia. The results published in issues of this work prior to No. 12, 1919, were ascertained by applying to the quantities exported during each year the average price per unit ruling in some year arbitrarily taken as the basic year. The advantage of the method now adopted is that the results are comparable throughout, whereas under the method previously followed each year was comparable with the basic year only.

3. Effect on Export Values.—The following table shows the value of exports as actually recorded in each year specified, together with the value computed on the assumption that the prices of 1901 were maintained. The table also shows the yearly "price-levels" based upon the results so ascertained.

This table obviously furnishes a measure of the influence of prices on the value of exports in each year since 1901. Column IV.—values computed on 1901 prices—represents the volume of exports (less specie and gold bullion), expressed in the common denomination of value, and from the figures therein it will be seen that, had the prices of 1901 remained constant, the value of the exports of merchandise during the year 1923–24, for example, would have been £47,543,823 only, instead of £116,672,542—the value actually recorded. The difference between these amounts (£69,128,719) results from a rise of 145 per cent. (i.e., from 1,000 to 2,454) in the prices of commodities for the period intervening between 1901 and 1923–24. A further increment in values has arisen from the premium on exported gold. During 1923–24 the premium on gold represented £193,418, or 8.72 per cent. on the standard price. Thus, on the basis of 1901 prices, the total value of the exports during 1923–24 would have been £50,165,027 instead of £119,487,164 as recorded.

It will be seen from the column "Price-levels" that prices as indicated by the exports rose from the beginning of the decade to the year 1906. Owing to the large proportion of the aggregate value of exports represented by wool and wheat, any change in the price of these commodities has a marked effect on the index-numbers for the total group of exports, and it is to their influence that the fall of prices in 1911 is mainly due. From that year to 1920–21 prices steadily increased, but there was a considerable decline during 1921–22. An upward trend was manifested during 1922–23, and the price level for that year for all groups of exports was 2,039 as compared with 1,721 for 1921–22. The high price realized for wool during 1923–24 was responsible for the exceptional increase in the price-level of the pastoral group during the year, the index number reaching a level greatly in excess of any previous year. The price level for all groups of commodities rose sharply to 2,454 during 1923–24, the main contributing factor being the abnormal increase in the index number for the pastoral group. The index numbers for the agricultural and dairy produce groups show that commodities included therein were lower in price, while the index numbers for the pastoral, mining and miscellaneous groups indicate that prices of such commodities during 1923–24 were higher than in 1922–23.

AUSTRALIAN EXPORTS.—VALUES AND PRICE LEVELS, 1901, 1906, AND
1911 TO 1923–24.

Year.	Exports of Specie and Gold Bullion.	Other Exports.		Total Exports (including Specie and Gold Bullion).		Price-Levels. (a) Year 1901 = 1,000.
		Values as Recorded.	Values Computed on Mass Prices of 1901.	Values as Recorded.	Values Computed on Mass Prices of 1901.	
I.	II.	III.	IV.	V.	VI.	VII.
	£	£	£	£	£	
1901 ..	14,347,776	35,348,396	35,348,396	49,696,172	49,696,172	1000
1906 ..	16,895,059	52,842,704	42,005,330	69,737,763	58,900,389	1258
1911 ..	11,561,639	67,920,619	58,501,825	79,482,258	70,063,464	1161
1912 ..	11,881,216	67,214,874	53,218,427	79,096,090	65,099,643	1263
1913 ..	3,164,105	75,407,664	58,455,553	78,571,769	61,619,658	1290
1914–15 ..	2,474,197	58,118,379	44,740,861	60,592,576	47,215,058	1299
1915–16 ..	10,391,019	64,387,302	40,469,705	74,778,321	50,860,724	1591
1916–17 ..	11,521,815	86,433,667	43,985,398	97,955,482	55,507,213	1965
1917–18 ..	6,483,265	74,945,956	35,962,551	81,429,221	42,445,816	2084
1918–19 ..	7,252,202	106,711,774	52,489,805	113,963,976	59,742,007	2033
1919–20 ..	5,654,909b	144,168,600	64,103,424	149,823,509	68,516,379	2249
1920–21 ..	5,371,421b	126,787,491	56,249,996	132,158,912	60,330,722	2254
1921–22 ..	3,487,615b	124,358,920	72,259,686	127,846,535	75,225,164	1721
1922–23 ..	2,231,780b	115,638,367	56,713,275	117,870,147	58,818,605	2039
1923–24 ..	2,814,622b	116,672,542	47,543,823	119,487,164	50,165,027	2454

(a) These are index-numbers for the total group of exports, excluding specie and gold bullion.

(b) Including premium on gold exported 1919–20, £1,241,954, or 28.8 per cent. on standard price; 1920–21, £1,290,695, or 32.1 per cent.; 1921–22, £522,137 or 17.6 per cent; 1922–23, £126,450 or 6.04 per cent.; 1923–24, £193,418 or 8.72 per cent.

4. **Price-Levels of Exports.**—The following table of index-numbers shows the variations in price of the different classes of goods exported, grouped according to their industrial origin:—

AUSTRALIAN EXPORTS.—PRICE-LEVELS, 1901, 1906 AND 1911 TO 1923-24.

Year.	Agricultural Produce.	Pastoral Produce.	Dairy Produce.	Mineral Produce.(a)	Miscellaneous.	All Classes.(a)
1901	1,000	1,000	1,000	1,000	1,000	1,000
1906	1,155	1,344	1,021	1,113	991	1,258
1911	1,243	1,193	1,085	944	1,227	1,161
1912	1,388	1,268	1,198	1,133	1,254	1,263
1913	1,324	1,334	1,124	1,114	1,329	1,290
1914-15 ..	1,480	1,323	1,176	1,066	1,221	1,299
1915-16 ..	1,927	1,589	1,488	1,393	1,106	1,591
1916-17 ..	1,726	2,131	1,690	1,650	1,357	1,965
1917-18 ..	1,954	2,250	1,624	1,760	1,401	2,084
1918-19 ..	1,864	2,166	1,855	1,692	1,775	2,033
1919-20 ..	2,145	2,393	2,023	1,787	2,150	2,249
1920-21 ..	3,177	2,093	2,854	1,813	2,179	2,254
1921-22 ..	2,108	1,717	1,507	1,427	1,845	1,721
1922-23 ..	1,931	2,213	1,845	1,459	1,701	2,039
1923-24 ..	1,700	2,895	1,785	1,529	1,803	2,454

(a) Excluding gold which, since February, 1919, has been exported at a premium.

§ 13. External Trade of Australia and other Countries.

1. **Essentials of Comparisons.**—Direct comparisons of the external trade of any two countries are possible only when the general conditions prevailing therein, and the system of record, are more or less identical. For example, in regard to the mere matter of record, it may be observed that in one country the value of imports may be the value at the port of shipment, while in another the cost of freight, insurance, and charges may be added thereto. Again, the values of imports and exports in the one may be declared by merchants, whereas in the other they may be the official prices fixed from time to time by a commission constituted for the purpose. In later years, moreover, a very substantial difference in the value of imports would arise from the different methods of converting the moneys of foreign countries, i.e., from the application of current rates of exchange or of the mint par. Lastly, the figures relating to the external trade of any country are also affected in varying degree by the extent to which they include transit or re-export trade. Including bullion and specie, the transit trade of Belgium, for example, represented, prior to the war, approximately 40 per cent. of the gross trade recorded; of Switzerland, 45 per cent.; of France, 20 per cent.; and of the United Kingdom, 15 per cent.; whereas in Australia the same element represents, normally, about 4 per cent., and in New Zealand even less.

2. **"Special Trade" of Various Countries.**—Special trade may be defined according to the interpretation of the British Board of Trade, as (a) imports entered for consumption in the country (as distinguished from imports for transshipment or re-export) and (b) exports of domestic products.

In the following table the figures relate as nearly as possible to imports entered for consumption in the various countries specified, and to exports of their domestic products. It is to be noted, however, that these figures do not invariably denote the same thing throughout, since, in the United Kingdom and other manufacturing countries, raw or partly manufactured materials are imported as for home consumption, and, after undergoing some process of manufacture or further modification, are re-exported as domestic production. Further, the statistical records of many countries do not distinguish between bullion and specie imported for the use of the particular country (home consumption) and the amount in transit, nor between the exports of that produced within the country and that re-exported. Nevertheless, a comparison of this character reveals

approximately the extent of the external trade which otherwise would not be manifest. The figures relating to foreign countries have been converted on the average of the commercial rates of exchange for the years subsequent to the war.

IMPORTS FOR HOME CONSUMPTION, AND EXPORTS OF DOMESTIC PRODUCTS —INCLUDING BULLION AND SPECIE, VARIOUS COUNTRIES.

Country.	Year ended—	Trade.			Trade per Inhabitant.					
		Imports.	Exports.	Total.	Imports.	Exports.	Total.			
		£1,000	£1,000	£1,000	£ s. d.	£ s. d.	£ s. d.			
• C'wealth of Australia	30/6/24	137,294	116,163	253,457	23 17 6	20 4 1	44 1 7			
	31/12/13	76,323	75,113	151,436	15 17 11	15 12 10	31 10 9			
United Kingdom (a)	31/12/24	1,139,636	795,365	1,935,061	23 17 11	16 13 6	40 11 5			
	31/12/13	671,265	525,461	1,196,726	14 11 8	11 8 4	26 0 0			
Canada (a)	31/3/24	200,757	234,910	435,667	22 16 10	26 14 7	49 11 5			
	31/3/14	132,019	89,915	221,934	16 13 6	11 7 2	28 0 8			
New Zealand	31/12/24	47,836	51,921	99,757	35 13 11	38 14 11	74 8 10			
	31/12/13	21,879	22,578	44,457	20 10 7	21 3 8	41 14 3			
Union of South Africa	31/12/24	63,725	75,847	139,572	9 3 11	10 18 11	20 2 10			
	31/12/22	51,557	60,334	111,891	7 8 11	8 14 4	16 3 3			
United States of America (a)	30/6/24	784,237	955,587	1,739,874	7 8 5	9 0 9	16 9 2			
	30/6/14	391,780	493,182	884,962	4 0 0	5 0 8	9 0 8			
Argentina Republic	31/12/22	125,390	122,911	248,301	14 6 8	14 1 0	28 7 8			
Belgium	31/12/23b	154,063	113,465	267,528	20 8 8	15 1 0	35 9 8			
	31/12/12	210,211	160,054	370,265	27 15 3	21 2 10	48 18 1			
Denmark(a)	31/12/23	78,526	63,343	141,869	23 17 6	19 5 2	43 2 8			
	31/12/12	41,954	33,940	75,894	14 19 8	12 2 5	27 2 1			
France	31/12/23	465,829	434,736	900,565	11 17 7	11 1 9	22 10 4			
	31/12/12	350,482	281,495	631,977	8 16 9	7 1 11	15 18 8			
German Empire	31/12/12	541,675	447,392	989,067	8 3 9	6 15 3	14 19 0			
Italy	31/3/22	141,530	82,239	223,769	3 10 7	2 1 1	5 11 8			
	31/12/12	149,113	97,536	246,649	4 5 2	2 15 8	7 0 10			
Japan (a)	31/12/22	211,670	133,338	305,008	3 15 8	3 5 6	7 1 2			
	31/12/12	66,007	57,972	123,979	1 5 3	1 2 2	2 7 5			
Netherlands	31/12/22	175,927	108,712	284,639	25 4 3	15 11 7	40 15 10			
	31/12/20	314,717	163,412	478,129	46 8 6	24 2 2	70 10 8			
Norway	31/12/22	52,557	31,496	84,053	19 16 8	11 17 9	31 14 5			
	31/12/12	28,756	18,147	46,903	11 15 9	7 8 10	19 4 7			
Spain (a)	31/12/22	106,428	50,348	157,276	4 19 8	2 7 8	7 7 4			
	31/12/12	42,089	41,826	83,915	2 2 9	2 2 6	4 5 3			
Sweden (a)	31/12/23	75,852	60,886	142,738	12 13 4	11 3 5	23 16 9			
	31/12/12	44,005	42,257	86,262	7 17 4	7 10 10	15 8 2			
Switzerland (a)	31/12/22	81,841	73,382	155,223	21 1 10	18 18 3	40 0 1			
	31/12/12	81,577	55,629	137,206	21 6 7	14 10 11	35 17 6			

(a) Excluding Bullion and Specie.

(b) Includes Luxembourg.

§ 14. Trade of the United Kingdom with Australia, compared with that of Competing Countries.

1. Proportion of Trade from United Kingdom and Competing Countries.—The failure of the United Kingdom to maintain the position formerly held in the import trade of Australia has been a matter of more than ordinary interest for some years. Since 1908 a permanent resident Commissioner appointed by the British Board of Trade has been established in Australia for the purpose of advising manufacturers and merchants in the United Kingdom with regard to Australian trade affairs. From the 8th August, 1907, the Commonwealth Customs Tariffs have provided special rates in favour of goods from the United Kingdom with the object of assisting the British manufacturer to retain or improve his position in this market.

In an investigation into the relative position, as compared with other countries, occupied by the United Kingdom in the import trade of Australia, the comparison must, of course, be restricted to those classes of goods which are produced or manufactured in the United Kingdom. The imports to Australia include many commodities, such as tea, rice, unmanufactured tobacco, petroleum products, crude rubber, copra, timber,

etc., which the United Kingdom could not supply. These items, in addition to others not available from that country, have, therefore, been omitted from the computation hereunder.

The imports into Australia have been classified under nine headings, and the trade of the United Kingdom therein is compared with that of France, Germany, Japan, and the United States. These countries have been selected as the principal competitors with the United Kingdom for the trade of Australia under the specified headings.

AUSTRALIAN IMPORTS.—PRODUCTS OF VARIOUS COUNTRIES, 1913 AND 1920-21 TO 1923-24.

Nature of Imports.	Year.	United Kingdom.	France.	Germany.	Japan.	U.S. of America.	All Countries.
	£	£	£	£	£	£	£
Foodstuffs of animal origin	1913 ..	301,025	3,093	12,071	6,988	239,229	947,697
	1920-21	406,982	2,557	..	5,695	310,202	1,224,099
	1921-22	345,803	3,145	..	6,423	390,545	1,535,308
	1922-23	335,022	4,074	200	9,052	346,090	1,770,241
	1923-24	453,861	3,364	274	9,872	306,164	2,204,883
Spiritous and alcoholic liquors	1913 ..	1,227,561	343,394	143,426	1,689	2,805	1,947,248
	1920-21	1,443,554	346,059	..	480	53	2,000,248
	1921-22	1,364,857	134,430	31	126	..	1,583,382
	1922-23	1,585,244	177,597	490	160	66	1,864,738
	1923-24	1,752,607	222,626	1,712	10	2,778	2,102,219
Apparel, textiles, and manufactured fibres	1913 ..	12,254,561	961,025	1,712,395	475,973	623,542	19,935,750
	1920-21	34,282,863	1,808,371	55	3,215,401	4,125,344	52,322,707
	1921-22	23,165,981	1,447,505	275	2,755,020	1,657,927	34,225,643
	1922-23	31,015,472	1,702,088	54,482	2,928,768	2,432,296	44,570,027
	1923-24	24,979,055	2,310,817	271,909	2,657,125	2,011,387	38,482,446
Metals, metal manufactures and machinery	1913 ..	13,905,483	217,148	2,380,152	7,657	3,817,705	21,670,212
	1920-21	25,103,669	237,338	10,682	237,095	13,518,897	42,220,826
	1921-22	14,443,901	337,048	70,099	69,993	7,194,024	25,096,571
	1922-23	20,159,269	306,487	229,225	73,346	10,095,490	35,203,294
	1923-24	22,347,802	484,638	319,497	57,107	15,991,224	43,751,850
Paper and stationery	1913 ..	1,789,577	21,930	266,483	10,656	403,679	3,134,750
	1920-21	3,480,920	109,027	1,352	106,649	1,325,978	8,978,897
	1921-22	2,260,155	122,122	2,337	17,744	523,048	4,855,564
	1922-23	3,577,157	143,373	19,918	25,052	630,867	6,275,873
	1923-24	4,064,670	171,957	47,440	19,772	677,986	6,443,226
Jewellery, time-pieces, and fancy goods	1913 ..	521,290	88,070	263,688	19,307	138,217	1,442,292
	1920-21	1,043,357	209,422	12	161,636	357,394	2,609,446
	1921-22	769,645	104,583	24	86,254	231,162	1,762,373
	1922-23	1,003,207	165,016	53,236	149,477	261,561	2,405,779
	1923-24	959,693	155,293	134,257	102,149	314,763	2,477,695
Earthenware, cements, glass, etc.	1913 ..	650,138	40,245	453,188	21,493	62,887	1,565,727
	1920-21	1,294,509	13,650	17	620,028	323,232	3,184,438
	1921-22	1,199,808	20,252	25	202,257	166,885	1,886,934
	1922-23	1,311,817	20,090	10,882	221,253	155,720	2,205,799
	1923-24	1,462,533	17,438	32,092	181,736	219,969	2,441,288
Drugs, chemicals, fertilizers	1913 ..	1,020,647	245,426	304,179	139,178	210,758	2,721,902
	1920-21	2,415,128	425,259	37,409	88,435	1,243,037	5,591,325
	1921-22	1,718,317	228,599	5,451	50,740	619,954	3,556,742
	1922-23	1,932,104	266,499	57,980	31,572	586,548	3,895,988
	1923-24	1,875,757	220,889	88,735	43,495	574,636	3,878,526
Rubber and leather and manufactures thereof and substitutes therefor	1913 ..	485,216	68,686	347,045	688	433,837	1,717,035
	1920-21	788,383	169,600	..	3,963	1,291,509	3,093,611
	1921-22	503,498	135,473	2	1,048	508,765	1,583,611
	1922-23	687,663	152,341	15,475	759	1,151,893	2,643,498
	1923-24	692,595	147,826	13,731	2,272	1,592,065	3,497,381
Total above-mentioned imports	1913 ..	32,155,498	1,989,017	5,882,627	683,629	5,982,659	55,082,613
	1920-21	70,199,865	3,321,283	49,527	4,489,382	22,495,646	121,225,597
	1921-22	45,761,965	2,533,157	78,244	3,189,605	11,292,310	76,086,128
	1922-23	61,656,955	2,937,565	441,888	3,439,439	15,660,531	100,835,201
	1923-24	58,588,573	3,734,848	909,647	3,073,538	21,690,972	105,279,514
Total imports (less bullion and specie)	1913 ..	40,498,803	2,222,631	7,029,325	950,300	10,907,512	78,196,109
	1920-21	76,845,973	3,507,811	52,432	5,230,039	36,110,081	163,781,682
	1921-22	52,987,879	2,731,728	79,447	3,581,614	13,822,364	103,022,132
	1922-23	68,300,489	3,231,197	593,636	3,936,150	24,850,931	131,727,011
	1923-24	63,599,700	4,101,137	1,368,894	3,557,834	34,556,516	140,556,501

**AUSTRALIAN IMPORTS.—PRODUCTS OF VARIOUS COUNTRIES.—PERCENTAGES,
1913 AND 1920-21 TO 1923-24.**

Nature of Imports.	Year.	United Kingdom.	France.	Germany.	Japan.	U.S. of America.	All Countries.
Foodstuffs of animal origin	1913 ..	31.77	0.33	12.74	0.74	30.52	100
	1920-21	33.25	0.21	..	0.47	25.35	100
	1921-22	22.52	0.20	..	0.42	25.43	100
	1922-23	18.93	0.23	0.01	0.51	19.55	100
	1923-24	20.58	0.15	0.01	0.45	13.89	100
Spirituous and alcoholic liquors	1913 ..	63.04	17.64	7.37	0.09	0.14	100
	1920-21	72.19	17.30	..	0.00	0.00	100
	1921-22	86.18	8.49	..	0.01	..	100
	1922-23	85.02	9.52	0.03	0.01	0.00	100
	1923-24	83.37	10.59	0.08	0.00	0.13	100
Apparel, textiles, and manufactured fibres ..	1913 ..	61.48	4.82	8.50	2.39	3.13	100
	1920-21	65.52	3.46	0.00	6.15	7.88	100
	1921-22	67.66	4.23	0.00	8.05	4.85	100
	1922-23	69.59	3.82	0.12	6.57	5.46	100
	1923-24	64.91	6.00	0.71	6.90	5.23	100
Metals, metal manufactures, and machinery	1913 ..	64.17	1.00	10.98	0.04	17.62	100
	1920-21	59.46	0.56	0.03	0.68	32.02	100
	1921-22	57.55	1.34	0.28	0.28	28.67	100
	1922-23	57.26	0.67	0.65	0.21	28.68	100
	1923-24	51.08	1.11	0.73	0.13	36.55	100
Paper and stationery	1913 ..	57.41	0.70	8.50	0.34	12.88	100
	1920-21	38.77	1.21	0.02	1.19	14.77	100
	1921-22	46.55	2.52	0.05	0.37	10.77	100
	1922-23	57.00	2.28	0.32	0.40	10.05	100
	1923-24	63.08	2.67	0.74	0.31	10.52	100
Jewellery, time-pieces, and fancy goods	1913 ..	36.14	6.11	18.23	1.34	9.58	100
	1920-21	39.98	8.03	0.00	6.19	13.70	100
	1921-22	43.67	5.93	0.00	4.89	13.12	100
	1922-23	41.70	6.86	2.21	6.21	10.87	100
	1923-24	38.74	6.27	5.42	4.12	12.70	100
Earthenware, cements, glass, etc.	1913 ..	41.52	2.57	28.94	1.37	4.02	100
	1920-21	38.77	0.43	0.00	19.47	10.15	100
	1921-22	63.59	1.07	0.00	10.72	8.84	100
	1922-23	59.47	0.91	0.49	10.03	7.06	100
	1923-24	59.91	0.71	1.31	7.45	9.01	100
Drugs, chemicals, and fertilizers	1913 ..	37.40	9.02	11.18	5.11	7.74	100
	1920-21	43.19	7.60	0.67	1.58	22.23	100
	1921-22	43.31	6.43	0.15	1.43	17.43	100
	1922-23	50.88	6.84	1.49	0.81	15.06	100
	1923-24	48.36	5.70	2.29	1.12	14.82	100
Rubber and leather and manufactures thereof, and substitutes therefor	1913 ..	28.26	4.00	20.21	0.04	25.27	100
	1920-21	25.50	5.48	..	0.13	41.75	100
	1921-22	31.79	8.55	0.00	0.07	32.13	100
	1922-23	26.01	5.76	0.59	0.03	43.57	100
	1923-24	19.80	4.23	0.39	0.06	45.52	100
Total above-mentioned articles	1913 ..	58.38	3.61	10.68	1.24	10.86	100
	1920-21	57.91	2.74	0.04	3.70	18.56	100
	1921-22	60.15	3.33	0.10	4.19	14.84	100
	1922-23	61.15	2.91	0.44	3.41	15.53	100
	1923-24	55.65	3.55	0.86	2.92	20.60	100
Total imports (less bullion and specie)	1913 ..	52.37	2.84	8.99	1.22	13.95	100
	1920-21	46.92	2.20	0.03	3.19	22.05	100
	1921-22	51.44	2.65	0.08	3.48	18.27	100
	1922-23	51.92	2.45	0.45	2.99	18.87	100
	1923-24	45.25	2.92	0.97	2.53	24.59	100

The total value of the commodities included in the competitive classes increased from £55,082,613 during 1913 to £105,279,514 during 1923-24. The two classes of goods which bulked largely in these totals were—(a) metals, metal manufactures and machinery, and (b) apparel, attire, and manufactured fibres. The value of goods included in these two groups represented 78 per cent. of the total value of competitive commodities during 1923-24, as compared with 75 per cent. during 1913.

Of the total value of competitive goods the United Kingdom supplied 55.65 per cent. during 1923-24 as against 58.38 per cent. during 1913 and 61.15 per cent. during

1922-23. In six of the competitive groups of imports, the proportion supplied by the United Kingdom declined during 1923-24 as compared with the previous year. The United Kingdom supplied Australia during 1923-24 with 83.37 per cent. of the total oversea purchases of spirituous and alcoholic liquors; 64.91 per cent. of apparel and attire; 63.08 per cent. of paper and stationery; 59.91 per cent. of earthenware, glassware, etc.; and 51.08 per cent. of metal manufactures and machinery.

The share of Japan in the competitive trade increased from 1.24 per cent. in 1913 to 3.70 per cent. in 1920-21, but fell to 2.92 per cent. in 1923-24. The classes of goods chiefly imported from Japan are as follows:—Apparel and textiles, metal manufactures and machinery, china and porcelain ware, earthenware, glass and glassware, paper and stationery, and fancy goods.

The position of the United States in this competitive trade has improved from 10.86 per cent. in 1913 to 20.60 per cent. in 1923-24, though it is lower than in 1919-20, when it represented 23.68 per cent. In the latest pre-war year (1913), the value of goods from the United States in the "competitive" groups was £5,982,659, whereas in 1923-24 it was £21,690,972. The following are the principal groups of commodities in which United States sales to Australia during 1923-24 were increased over those of 1913:—Apparel and textiles, manufactured metals and machinery (including motor cars, chassis, etc.), and rubber and manufactures thereof.

The position of France declined from 3.61 per cent. in 1913 to 3.55 per cent. in 1923-24. The proportion supplied by France has, however, not varied greatly, as the imports during the five years under review have represented about 3 per cent. of the competitive trade.

The proportion of the imports supplied by Germany in 1913 was 10.68 per cent. as compared with 58.38 per cent. from the United Kingdom; 3.61 per cent. from France; 1.24 per cent. from Japan and 10.86 per cent. from the United States. The corresponding figures for the year 1923-24 were:—Germany, 0.86 per cent.; United Kingdom, 55.65 per cent.; France, 3.55 per cent.; Japan, 2.92 per cent., and the United States, 20.60 per cent.

From the foregoing it will be seen that the more prominent position held by the United States of America and by Japan in the Australian import market in 1922-23 and 1923-24 was not altogether at the expense of the United Kingdom, but represented a substitution of the trade formerly supplied by Germany.

Comparing the percentages of imports from each country during the period 1920-21 to 1923-24 it will be noticed that the proportions supplied by the United States, France, and Germany increased, while those from Japan and the United Kingdom decreased.

2. Preferential Tariffs.—The Commonwealth Tariff Act of 1908 provided preferential tariff rates in favour of goods produced or manufactured in the United Kingdom. Subsequent amendments of the Tariff have extended the list of articles to which the preferential rates apply. This favourable treatment of the United Kingdom was again extended by the Tariff submitted on the 24th March, 1920 (Tariff Act 1921).

On the introduction of the preferential treatment of British goods by the Commonwealth Tariff, it was required that British material or labour should represent not less than one-fourth the value of such goods. From the 1st September, 1911, it was required, in regard to goods only partially manufactured in the United Kingdom, that the final process or processes of manufacture should have been performed in the United Kingdom and that the expenditure on material of British production and/or British labour should have been not less than one-fourth of the factory or works cost of the goods in the finished state. These conditions were superseded during the year 1925.

Important alterations in the conditions governing the entry of goods into the Commonwealth under the British Preferential Tariff were made during 1925. The amended conditions apply in regard to goods which are invoiced to Australia on and after 1st April, 1925.

Under the new conditions Preference is granted in the Commonwealth as follows:—

(a) To goods which are wholly produced or wholly manufactured in the United Kingdom.

As to manufactured goods, these will only be considered "wholly manufactured in the United Kingdom" if in the raw materials used and also in the finished goods no manufacturing process has been performed outside the United Kingdom which is being commercially performed in the United Kingdom.

The Minister shall determine what are to be regarded as raw materials, and in such determination may include partially manufactured Australian materials.

- (b) To goods, not wholly produced or wholly manufactured in the United Kingdom in the terms of paragraph (a), provided they contain at least 75 per cent. of United Kingdom labour and/or material in their factory or works cost.
- (c) Notwithstanding anything contained in the preceding paragraphs, to goods of a class or kind not commercially manufactured in Australia provided they contain at least 25 per cent. of United Kingdom labour and/or material in their factory or works cost.
- (d) It is essential in every case that the final process or processes of manufacture shall take place in the United Kingdom, and that the goods are consigned therefrom direct to Australia.

It is also provided that the conditions of preference set out above shall apply (in addition to goods from the United Kingdom) to goods, claiming preference, shipped from any country to which the Commonwealth of Australia has extended Tariff Preference, whether the rates granted be those of the "British Preferential Tariff," the "Intermediate Tariff," or special rates.

The amended conditions of Preference have necessitated considerable alterations in the prescribed forms for goods exported to Australia, and an explanatory memorandum has been issued by the Department of Trade and Customs for the guidance of exporters of goods in regard to the provisions of the Customs Act and Regulations thereunder relating to :—

The value for duty of goods exported to the Commonwealth.

The conditions governing the entry of goods into the Commonwealth under the British Preferential Tariff, and an explanation of such conditions.

The prescribed Form of Invoice for goods exported to the Commonwealth.

The prescribed form of Combined Certificate of Value and of Origin for goods exported to the Commonwealth, for which entry is claimed at Preferential Tariff rates.

A list of the goods which for the purpose of the operation of the British Preferential Tariff shall be deemed to be of a class or kind not commercially manufactured in the Commonwealth.

On the basis of the imports during 1913, the preferential provisions of the Tariff of 1908-11 covered 65 per cent. of the imports of merchandise of United Kingdom origin, the margin of preference being equal to 5.08 per cent. of the value of the goods. On the same basis the Tariff of 1921 has extended the application of the preferential Tariff rates to 90 per cent. of the imports from the United Kingdom, and, at the same time, has increased the margin of preference to 12.22 per cent. *ad valorem*. The average equivalent *ad valorem* rate of duty payable under the tariff of 1921 on goods of United Kingdom origin is about 25 per cent., whereas the same goods under the general Tariff rates would be called upon to pay an average rate of about 37½ per cent.

An application of the Tariff of 1921 to the imports from the United Kingdom entered for home consumption during the year 1921-22 shows that over 90 per cent. of these imports were allotted a margin of 12.6 per cent. *ad valorem*, representing about £5,573,000 additional duty which would have been paid had the same goods been imported under the General Tariff rates. A similar computation applied to the imports from the United Kingdom during 1923-24 shows that approximately £7,337,000 additional duty would have been paid if the imports had been dutiable under the General Tariff rates, representing a margin in this case of 12.2 per cent. *ad valorem*.

3. Reciprocal Tariffs.—(i) *General.* The Tariff Act of 1921 introduced a new feature into Australian Tariffs in the form of an Intermediate Tariff. In submitting the schedule to Parliament, the Minister for Trade and Customs made the following statement of the object of the Intermediate Tariff :—" . . . the Minister is empowered under the Bill to enter into reciprocal arrangements with other Dominions of the British Crown. The Minister will be able, if we can arrange a satisfactory reciprocal agreement, to extend to other Dominions on individual items the British preference rate, or the intermediate rate, or, it may be, the general rate. Such agreements will be subject

to the ratification of Parliament. The provision simply means that if any of our sister self-governing Dominions desires to enter into reciprocal trade relationships with us, the Minister, with the British Preference Tariff, the Intermediate Tariff, and the General Tariff before him, may bargain with the sister Dominion and come to an agreement which, as I say, must subsequently be ratified by Parliament. . . . There is a provision of a somewhat similar character in regard to other countries than the Dominions, the only difference being that the Minister is empowered to extend to countries other than the Dominions only the Intermediate Tariff; that is to say, in entering into such negotiations, he is precluded from offering to those countries what we might term, for the purposes of this Bill, the Empire rate. He is confined in his negotiations with these other countries to the Intermediate Tariff."

(ii) *Union of South Africa.* Until 1922, the Union of South Africa was the only British Dominion with which Australia had a reciprocal Tariff arrangement. The Commonwealth Customs Tariff (South African Preference) Act, No. 17 of 1906 and subsequent amending Acts have provided preferential rates of duty to be applied to certain imported goods "when those goods are imported from and are the produce or manufacture of any of the British South African Colonies or Protectorates which are included within the South African Customs Union."

(iii) *Dominion of New Zealand.* On the 11th April, 1922, an agreement was made between the Commonwealth of Australia and the Dominion of New Zealand whereby goods specified in the schedule attached to the agreement should be admitted at the rates of duty set out in the schedule. In addition to the goods specially mentioned in the schedule, it is provided that "all other goods being the produce or manufacture of Australia or New Zealand shall be dutiable at the rates applicable to goods being the produce or manufacture of the United Kingdom, upon entry into New Zealand or Australia respectively." This agreement was ratified by the Commonwealth Parliament by the Customs Tariff (New Zealand Preference) 1922, and, by Proclamation dated 24th August, 1922, came into operation on the 1st September, 1922.

(iv) *Dominion of Canada.* Although previous efforts to bring about reciprocal Tariff arrangements between Canada and Australia have not been successful, further negotiations with this object in view are in progress.

4. *Preferential Tariff of the United Kingdom.*—The post-war Tariff of the United Kingdom provides Preferential Customs Rates on certain goods where they are shown to the satisfaction of the Commissioners of Customs and Excise to have been consigned from and grown, produced, or manufactured in the British Empire. Manufactured articles generally are not entitled to the preferential rates unless 25 per cent. of their value is the result of labour within the British Empire. The principal items of interest to Australia which are accorded preferential treatment under the Tariff of the United Kingdom are:—Fruits, dried and preserved; jam; fruit pulp; preserved milk; wine; and brandy.

The question of Tariff Preference was discussed at the Imperial Economic Conference held in 1923, when the following resolution was adopted:—

"This Imperial Economic Conference, holding that, especially in present circumstances, all possible means should be taken to develop the resources of the Empire and trade between the Empire countries, desires to affirm the resolution on the subject of Imperial Preference passed by the Imperial War Conference of 1917."

The resolution was agreed to by all delegates, including the representative from Great Britain. The British Ministry in power at the time was prepared to grant certain increased preferences, but stipulated that their proposals could not go beyond the established fiscal system.

Under the existing tariff there is a duty of 10s. 6d. per cwt. on dried figs, raisins, plums and apricots imported from foreign countries, with a preference of one-sixth, i.e., of 1s. 9d. per cwt., if of Empire origin. It was proposed that the duty be retained, but that Empire raisins, figs, and plums should be admitted free, thus having a preference of 10s. 6d. per cwt. Other proposals of the British Ministry to the conference included a preference of 2s. per cwt. on currants, 5s. per cwt. on raw apples, 10s. per cwt. on honey, and also increased preferences on sparkling wines and tobacco.

Before the proposals could be submitted to the British Parliament the Ministry in power at the date of conference was defeated. The new Prime Minister (Mr. Ramsay MacDonald) announced, however, that the Imperial Preference resolutions of the Imperial Economic Conference would be discussed in the House of Commons during June, 1924, and that the debate would be unfettered and the votes on non-party lines. The proposals duly came before Parliament, and as a result of the debate on Imperial Preference, the first four resolutions, which proposed Imperial Preference without imposing any new charge upon the foreigner, were defeated by small majorities. The other six resolutions, of which notice had been given, were then withdrawn.

After the election of October, 1924, a new Ministry, with Mr. Stanley Baldwin as Prime Minister, came into office, and, in the Budget submitted to the House of Commons during June, 1925, clauses dealing with increased Imperial preference on Empire-grown tobacco, preserved and dried fruits, wine, sugar, and hops were proposed and adopted. The proposed new rates of duty take effect on 1st July, 1925, excepting that relating to hops, which comes into operation on 16th August, 1925.

§ 15. Customs Tariff of 1921.

1. *General.*—The Commonwealth Customs Duties are levied partially in the form of *ad valorem* duties and partially in the form of fixed rates per unit of quantity; in a few instances both these forms are complementary, and in a few other instances provision is made for the application of fixed rates or *ad valorem* rates according to which will produce the greater amount of duty. Under the Tariff of 1921 about 46 per cent. of imports (on the basis of the imports of 1913) would be subject to *ad valorem* rates, about 25 per cent. would pay fixed rate duties, and the balance—about 29 per cent.—would be free of duty.

2. *Comparisons with Tariff of 1908-11.*—The following table shows approximately the changes made in the average equivalent *ad valorem* rates of duty on the various classes of imports by the Tariff of 1921 in comparison with the Tariff of 1908-11. The results given have been obtained by applying, as closely as possible, the rates of duty prescribed by each Tariff to the imports of 1913. The year 1913 has been selected as representing more nearly than any subsequent year the normal composition of Commonwealth imports. Owing to the many subdivisions which have been made in the items of the earlier Tariff by the recent revision, and the inadequacy of the statistics of imports to meet these changes, the results must be taken as merely approximate to the truth. As the imports for 1913 have been taken as the basis of the comparison it has been necessary to make allowance for the increase in prices in computing the *ad valorem* equivalent of the fixed rate duties in operation under the Tariff of 1921. For this purpose the average prices for similar goods imported during 1921-22 have been taken. Amendments to the 1921 Tariff Schedule have been taken into account in the following computation.

From the results given it would appear that the Tariff of 1921 has reduced the proportion of imports which were free from duty from 42.96 per cent. to 28.95 per cent., or, conversely, has increased the proportion of dutiable goods from 57.04 per cent. to 71.05 per cent. This result is due in the most part (75 per cent.) to the imposition of duties of general application, and to a lesser degree (25 per cent.) to duties imposed for the purpose of providing preference to the manufactures of the United Kingdom.

The average *ad valorem* rate of duty over all merchandise—both dutiable and free—has been raised from 17.08 per cent. to 22.63 per cent. This comparatively small increase in what is the equivalent of an average *ad valorem* rate is due to the effect of increased prices for those goods which are subject to fixed rate duties. In order to determine what change has been made in the average rate of duty over all goods, it is usual to put all rates on a common *ad valorem* basis. Notwithstanding that in numerous cases very substantial increases were made in these fixed rate duties the increase in price was so much greater, that their *ad valorem* incidence is less, at the present time, under the 1921 Tariff than it was when the Tariff of 1908-11 was in operation. This is clearly shown in the following table.

AUSTRALIAN CUSTOMS TARIFFS OF 1908-11 AND OF 1921 COMPARED.

Class of Imports.	Tariff of 1908-11.			Tariff of 1921.		
	Per-centage of Free Goods.	Equivalent <i>ad val.</i> Rates of Duty on—		Per-centage of Free Goods.	Equivalent <i>ad val.</i> Rates of Duty on—	
		All Mer- chandise.	All Dutiable Mer- chandise.		All Mer- chandise.	All Dutiable Mer- chandise.
I. Foodstuffs of Animal Origin ..	10.42	15.43	17.22	10.42	14.71	16.44
II. Foodstuffs of Vegetable Origin ..	5.33	33.11	34.97	12.00	23.75	26.98
III. Beverages (non-alcoholic) and Substances used in making ..	79.62	4.36	21.38	79.62	4.08	20.04
IV. Spirituous and Alcoholic Liquors ..	00.00	144.95	144.95	00.00	106.92	106.92
V. Tobacco and preparations thereof ..	00.00	159.00	159.00	00.00	85.32	85.32
VI. Live Animals ..	87.70	00.07	00.59	100.00	00.00	00.00
VII. Animal Substances (mainly un- manufactured) ..	80.37	2.70	13.76	80.37	3.64	18.56
VIII. Vegetable Substances and Fibres ..	87.89	3.52	29.01	79.31	6.51	31.46
IX. (i) Apparel ..	15.12	24.75	29.15	4.67	34.85	36.55
(ii) Textiles ..	45.39	9.45	17.31	44.60	12.40	22.36
(iii) Bags and Cordage ..	91.30	1.91	21.92	91.30	2.42	27.88
X. Oils, Fats, and Waxes ..	32.32	11.12	16.43	27.72	9.73	13.46
XI. Paints and Varnishes ..	4.43	16.25	17.00	4.07	21.33	22.23
XII. Stones and Minerals used in- dustrially ..	16.54	19.27	23.10	6.60	21.30	22.80
XIII. Ores and Mineral Earths ..	100.00	..	..	63.78	19.28	53.22
XIV. (i) Machines and Machinery. Agricultural Implements and Machinery ..	39.47	12.44	20.56	4.62	32.58	34.16
Other Machines and Machinery ..	25.92	14.80	19.98	10.60	23.62	26.43
Total Machines and Machinery ..	27.42	14.54	20.04	9.94	24.63	27.34
(ii) Manufactures of Metals, iron and steel (simpler forms) ..	52.18	3.94	8.25	1.60	20.83	21.17
Other Manufactures of Metals ..	42.33	11.64	20.18	16.74	22.83	27.43
Total Manufactures of Metals ..	47.22	7.81	14.80	9.22	20.74	22.85
XV. Rubber and Manufactures of Rubber ..	34.46	15.43	23.54	34.46	23.21	35.42
Leather and Manufactures of Leather ..	3.34	18.72	19.37	1.94	31.37	31.99
XVI. Wood and Wicker, raw and manufactured ..	7.70	15.53	16.83	2.86	21.64	22.28
XVII. Earthenware, Cements, China, Glass, and Stoneware ..	7.13	25.71	27.67	2.38	28.44	29.13
XVIII. (i) Paper ..	71.75	6.30	22.30	2.34	15.43	15.80
(ii) Stationery ..	67.46	7.82	24.03	67.04	10.05	30.47
XIX. Jewellery, Timepieces, and Fancy Goods ..	20.47	20.39	25.64	20.48	32.55	40.94
XX. Optical, Surgical and Scientific Instruments ..	75.38	3.52	14.26	21.91	22.37	28.65
XXI. Drugs, Chemicals, and Fertilizers ..	71.50	6.82	23.92	39.19	14.82	24.37
XXII. Miscellaneous ..	75.93	5.68	23.60	71.53	8.30	29.16
Total Merchandise ..	42.96	17.08	29.96	28.95	22.63	31.85
Total Merchandise, excluding Alcoholic Liquors and Tobacco ..	44.76	11.66	21.10	30.13	18.17	26.19

NOTE.—In computing the results given in the above table it has been assumed that all imports during 1913 were entered for consumption during the year and that all deferred duties were in operation.

Under the Tariff of 1908-11 the duty on whisky was 14s. per gallon, while under the Tariff of 1921 it is 30s. per gallon—an actual increase in duty of 114 per cent. In 1913 the import value of a gallon of bulk whisky was 6s. 6d., whereas in 1921-22 a similar gallon of whisky was valued at 26s. 5d.—an increase in price of 306 per cent. Thus under the 1908-11 Tariff a gallon of whisky valued at 6s. 6d. paid duty amounting to 14s. or 215 per cent. *ad valorem*, while under the Tariff of 1921 a gallon of whisky valued at 26s. 5d. would pay 30s. which, however, would represent only 113 per cent. *ad valorem*. The same thing applies, in varying degree, to all goods subject to fixed rate duties.

The classes most conspicuously affected in this way are those numbered I. to V. in the table above, and it will be noticed that for each of these classes the rates

of duty on the *ad valorem* basis are lower under the 1921 Tariff than before. These results do not indicate a reduction of duties, but merely an increase in prices greater than the increase in duties. As prices revert towards the pre-war level the duties collected under fixed rates will, of course, increase relatively to the cost of the goods.

§ 16. Commonwealth Trade Representation in Overseas Countries.

The Commonwealth is represented in the United Kingdom by the High Commissioner for Australia (Rt. Hon. Sir Joseph Cook, P.C., G.C.M.G.), with headquarters at Australia House, London. Oversea trade matters affecting Australia come within the scope of the duties attaching to the office of High Commissioner.

The Commonwealth has a Trade Representative in France, with headquarters at Paris. This official is attached to the High Commissioner's office, London.

The first appointment of a Commissioner for Australia in the United States of America was made in 1918. The present Commissioner, Mr. (now Sir) J. A. M. Elder, was appointed on 11th September, 1924, with headquarters at New York. Oversea trade matters affecting Australia come within the scope of the duties attaching to the office of Commissioner in United States of America.

Early in 1921, a Commonwealth Trade Commissioner was appointed in China, with offices at Shanghai and Hong Kong. This office was terminated in 1923. In 1922, Mr. E. T. Sheaf was appointed Australian Trade Representative in the East, with headquarters at Singapore, but the appointment was terminated in March, 1925.

CHAPTER VII.

TRANSPORT AND COMMUNICATION.

A. SHIPPING.

§ 1. System of Record.

So far as overseas vessels are concerned the system of record treats Australia as a unit, and counts, therefore, only one entry and one clearance for each voyage, without regard to the number of States visited.

On arrival of every vessel at a port in Australia, whether from an overseas country or from another port in Australia, the master must deliver to the Customs officer a form giving all particulars necessary for statistical purposes in regard to the ship, passengers, and cargo. Similarly, on departure from a port, a form containing corresponding information must be lodged. These forms, which provide a complete record of the movements of every vessel in Australian waters, are at the end of each month forwarded by the Customs officer at each port to the Commonwealth Bureau of Census and Statistics, and furnish the material for the compilation of the Shipping and Migration Returns. (Commencing with the 1st July, 1924, certain modifications have been adopted.)

Under the system previously in force it was found that the estimates of population, in so far as they were based on seaward movement, were unsatisfactory, and it is believed that the method referred to above gives decidedly better results.

From the 1st July, 1914, the statistical year for the record of Trade and Shipping of Australia was altered from the calendar year to the fiscal year ending 30th June.

In all instances the tonnage quoted is net tonnage.

§ 2. Oversea Shipping.

1. **Total Movement.**—In previous issues of the Year Book particulars were given of the number and tonnage of vessels entered and cleared each year since 1822. In this and future issues particulars for the last five years only will be shown. The following table gives the number and tonnage of overseas steam and sailing vessels entering Australian ports during the years 1919-20 to 1923-24 :—

TOTAL OVERSEA SHIPPING, ENTERED.—AUSTRALIA, 1919-20 TO 1923-24.

Year.	Steam.		Sailing.		Total.	
	Vessels.	Tons.	Vessels.	Tons.	Vessels.	Tons.
1919-20	1,265	3,842,735	211	198,809	1,476	4,041,544
1920-21	1,526	4,422,880	304	336,036	1,830	4,758,916
1921-22	1,429	4,466,655	138	93,726	1,567	4,560,381
1922-23	1,341	4,599,021	148	138,833	1,489	4,737,854
1923-24	1,437	4,808,129	109	103,007	1,546	4,911,136

The average tonnage of vessels entered has risen from 2,738 tons per vessel in 1919-20 to 3,177 tons in 1923-24.

2. *Comparison with other Countries.*—The place of Australia among various countries in regard to oversea shipping is indicated in the following table, which gives figures for total tonnage and tonnage per head of population.

OVERSEA SHIPPING.—VARIOUS COUNTRIES.

Country.	Calendar Year.	Tonnage Entered and Cleared.	
		Total. 000 omitted.	Per Inhabitant.
Australia	1924(a)	9,922	1.83
Belgium	1922	34,426(b)	4.57
Brazil	1922	54,920	1.79
Canada	1922	27,596	3.14
France	1923	72,392(b)	1.85
Germany	1922	44,820	0.75
Great Britain ..	1923	116,854(b)	2.70
India	1922	15,494(b)	0.05
Japan	1922	71,486	0.93
Netherlands ..	1922	37,618(b)	5.31
New Zealand ..	1923	4,163	3.22
Norway	1922	10,898(b)	4.11
Spain	1922	37,802	1.75
Sweden	1922	20,735	3.46
Union of South Africa ..	1922	11,519	1.66
United States ..	1923	133,489(c)	1.26

(a) To 30th June. (b) With cargoes only. (c) Exclusive of vessels trading on lakes and rivers between Canada and the United States.

3. *Shipping Communication with various Countries.*—In view of the defects in records purporting to show vessels and tonnage for particular countries (as pointed out on p. 265 of Official Year Book No. 17) it has been decided to restrict the statistics relating to the direction of shipping to and from Australia to the following tables in which countries situated on the main trade routes have been grouped.

4. *General Direction of Shipping.*—The grouping into larger geographical divisions, adopted in the following tables, to some extent avoids the limitations previously referred to except in the case of Africa.

OVERSEA SHIPPING, AUSTRALIA.—DIRECTION, 1919-20 TO 1923-24.

Countries.	Cargo and Ballast.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
TONNAGE ENTERED.						
United Kingdom and European Countries	Cargo	982,237	1,102,994	1,333,469	1,926,907	1,769,446
	Ballast	477,183	269,351	204,680	72,819	23,690
New Zealand	Cargo	411,819	518,789	421,365	392,526	500,001
	Ballast	173,601	350,370	213,347	167,187	401,959
Asiatic Countries and Islands in the Pacific	Cargo	682,592	837,195	686,886	821,036	893,179
	Ballast	538,630	631,004	794,175	279,043	188,762
Africa	Cargo	50,982	21,298	36,170	32,025	25,036
	Ballast	254,527	236,320	215,841	122,660	24,015
North and Central America	Cargo	454,830	747,599	629,888	911,026	1,059,229
	Ballast	3,642	8,747	15,940	2,944	5,403
South America	Cargo	11,501	8,236	1,179	5,470	12,039
	Ballast	..	27,013	7,641	4,211	8,377
	Cargo	2,593,961	3,236,111	3,108,757	4,088,990	4,258,930
	Ballast	1,447,583	1,522,805	1,451,624	648,864	652,206
Total		4,041,544	4,758,916	4,560,381	4,737,854	4,911,136

TONNAGE CLEARED.						
United Kingdom and European Countries	Cargo	1,925,711	1,864,330	1,819,444	2,193,528	2,127,662
	Ballast	12,547	15,421	13,951	11,776	13,699
New Zealand	Cargo	596,367	789,094	542,865	518,972	792,565
	Ballast	23,157	24,254	43,140	49,097	61,943
Asiatic Countries and Islands in the Pacific	Cargo	844,879	1,123,141	1,116,430	922,243	1,066,807
	Ballast	30,129	52,374	27,644	100,832	193,982
Africa	Cargo	320,721	387,649	581,359	121,175	105,127
	Ballast	4,789	7,506	..	..	3,558
North and Central America	Cargo	224,358	294,145	345,817	436,800	443,864
	Ballast	17,068	22,673	3,488	35,011	75,201
South America	Cargo	45,237	162,974	26,759	89,816	118,525
	Ballast	..	541	..	23,675	8,745
	Cargo	3,957,273	4,621,333	4,432,674	4,282,534	4,654,550
	Ballast	87,690	122,769	88,223	220,391	357,128
Total		4,044,963	4,744,102	4,520,897	4,502,925	5,011,678

5. Nationality of Oversea Shipping.—(i) *General.* The greater part of the shipping visiting Australia is of British nationality, though the proportion of British tonnage in 1920-21 was lower than in the immediately preceding year. This was largely due to the dislocation of the coal-mining industry in the United Kingdom. The exports of coal from Australia were, in consequence, largely increased, and the unusual practice of shipping coal from Australia to European countries was adopted, while the demand for Australian coal was the principal cause of the increased tonnage of foreign ships which were sent to carry the coal to their home countries. In 1923-24 approximately 79 per cent. of the shipping entering Australian ports was British, as compared with 77 per cent. in 1922-23.

Particulars of the nationality of oversea shipping for the last five years are given in the following table:—

OVERSEA SHIPPING, AUSTRALIA.—NATIONALITY OF VESSELS ENTERED,
1919-20 TO 1923-24.

Nationality.	Tonnage.				
	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
BRITISH—					
Australian	395,865	551,100	589,175	645,867	486,170
United Kingdom	2,553,850	2,541,310	2,802,487	2,754,316	2,939,210
Canadian	(a)	38,569	88,526	110,095	95,655
New Zealand	147,585	149,650	103,471	66,521	307,928
Other British	46,375	35,623	54,464	72,438	55,302
Cargo	2,096,754	2,529,089	2,568,236	3,226,702	3,342,994
Ballast	1,046,921	787,163	1,069,887	422,535	541,271
Total British	3,143,675	3,316,252	3,638,123	3,649,237	3,884,265
Per cent. on total	77.78	69.69	79.78	77.02	79.09
FOREIGN—					
Danish	9,716	24,542	28,416	39,394	54,161
Dutch	70,966	133,613	134,662	141,264	138,716
French	181,899	107,990	69,033	114,102	84,701
German .. ..	.. ..	.. ..	.. ..	44,666	44,354
Italian	63,733	128,466	105,159	50,608	61,312
Japanese	307,896	505,989	218,564	243,935	143,954
Norwegian	39,760	132,647	123,218	148,873	173,311
Swedish	20,741	85,405	65,971	82,230	90,641
United States	192,805	273,989	139,686	194,180	191,938
Other Foreign	10,353	50,023	37,549	29,365	43,733
Cargo	497,207	707,022	540,521	862,288	915,936
Ballast	400,662	735,642	381,737	226,329	110,935
Total Foreign	897,869	1,442,664	922,258	1,088,617	1,026,871
Per cent. on total	22.22	30.31	20.22	22.98	20.91
Cargo	2,593,961	3,236,111	3,108,757	4,088,990	4,258,930
Per cent. on total	64.18	68.00	68.17	86.30	86.72
Ballast	1,447,583	1,522,805	1,451,624	648,864	652,206
Per cent. on total	35.82	32.00	31.83	13.70	13.28
Grand Total	4,041,544	4,758,916	4,560,381	4,737,854	4,911,136

(a) Not available; included with other British.

The Australian tonnage which entered Australia from overseas during the year 1923-24 represented 9.90 per cent. of the total tonnage entered. This figure was less than the average for the quinquennium, which was 11.60 per cent.

(ii) *Proportion of British and Foreign with Cargo.* The relative proportions of British and foreign tonnage which entered Australia with cargo during the last five years are given in the next table. These figures may be considered to indicate more closely the proportion of the actual carrying trade done than does the total tonnage.

**OVERSEA SHIPPING, AUSTRALIA.—PERCENTAGE BRITISH AND FOREIGN
ENTERED WITH CARGO, 1919-20 TO 1923-24.**

Nationality.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
British	80.83	78.15	82.61	78.91	78.49
Foreign	19.17	21.85	17.39	21.09	21.51
Total	100.00	100.00	100.00	100.00	100.00

During the period under review the average annual tonnage of foreign vessels entering with cargo was 20.38 per cent.

(iii) *Principal Foreign Countries Engaged.* The following table shows the direction of the activities of the principal foreign countries engaged in the oversea carrying trade of Australia :—

OVERSEA SHIPPING, AUSTRALIA.—FOREIGN TONNAGE, 1923-24.

Countries.	Nationality.							
	Japanese.		French.		United States.		Dutch.	
	Entered.	Cleared.	Entered.	Cleared.	Entered.	Cleared.	Entered.	Cleared.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
EUROPEAN COUNTRIES—								
United Kingdom ..	..	..	..	4,344	..	..	..	..
France .. ..	..	..	37,946	27,777	..	..	..	..
Other European Countries ..	..	..	..	10,177	..	..	65,804	65,159
ASIATIC COUNTRIES AND ISLANDS IN THE PACIFIC—								
Netherlands East Indies ..	..	5,056	..	..	3,649	3,420	21,672	8,550
Japan	125,622	160,467	..	4,561	..	3,412	..	2,964
Straits Settlements ..	..	3,050	..	..	..	..	33,845	38,713
Other Asiatic Countries ..	2,884	9,882	1,100	1,100	..	..	5,220	11,580
New Zealand .. ..	..	..	..	..	..	..	9,932	12,721
New Caledonia .. ..	..	..	32,340	26,438	389	2,323	..	8
Other Pacific Islands ..	11,194	8,695	..	5,400	5,320	40,342	17	9
AFRICAN COUNTRIES	..	..	..	..	1,187	..	..	..
NORTH AMERICAN COUNTRIES—								
United States	4,254	..	8,971	3,918	178,059	124,040	2,226	..
Canada .. ..	..	..	4,344	..	3,334	..	..	..
SOUTH AMERICAN COUNTRIES	..	..	..	..	..	19,243	..	..
With Cargo	118,776	182,094	79,061	82,607	186,542	172,374	117,593	136,298
In Ballast	25,178	5,056	5,640	1,108	5,396	20,406	21,123	3,406
Total	143,954	187,150	84,701	83,715	191,938	192,780	138,716	139,704

Most of the foreign tonnage entered is employed between its home ports or the colonies of its own country and Australia, e.g., French shipping is engaged chiefly between Australia, France and New Caledonia, while Dutch ships are employed almost entirely between Australia and the Netherlands, the Netherlands East Indies, or Straits Settlements. Norwegian shipping is always an exception to this rule. The greater portion of Norwegian tonnage engaged in trade with Australia is composed of vessels operating under charters. Of the 173,311 tons of Norwegian shipping which entered Australia during 1923-24, 31,638 tons (18.26 per cent.) were in ballast.

During the year Japanese tonnage was engaged principally between Australia and Japan, though some tonnage entered from the United States of America, the Philippine Islands, and from the Pacific Islands.

(iv) *Nationality of Steam and Sailing Tonnage.* A further analysis is appended, distinguishing between steam and sailing vessels of British and foreign nationality which entered Australia during the years 1919-20 to 1923-24.

OVERSEA SHIPPING, AUSTRALIA.—NATIONALITY OF STEAM AND SAILING VESSELS ENTERED, 1919-20 TO 1923-24.

Description and Nationality of Vessels.	1919-20.		1920-21.		1921-22.		1922-23.		1923-24.	
	Ton-nage.	Per-cent-age.	Ton-nage.	Per-cent-age.	Ton-nage.	Per-cent-age.	Ton-nage.	Per-cent-age.	Ton-nage.	Per-cent-age.
Steam—										
British ..	3,102,345	81	3,232,463	73	3,597,388	81	3,634,411	79	3,866,000	80
Foreign ..	740,390	19	1,190,417	27	869,267	19	964,610	21	941,229	20
Total Steam	3,842,735	100 (95)	4,422,880	100 (98)	4,466,655	100 (98)	4,599,021	100 (97)	4,808,129	100 (98)
Sailing—										
British ..	41,330	21	83,789	25	40,735	43	14,826	11	17,365	17
Foreign ..	157,479	79	252,247	75	52,991	57	124,007	89	85,642	83
Total Sailing	198,809	100 (5)	336,036	100 (7)	93,726	100 (2)	138,833	100 (3)	103,007	100 (2)
Steam and Sailing—										
British ..	3,143,675	78	3,316,252	70	3,638,123	80	3,649,237	77	3,884,265	79
Foreign ..	897,869	22	1,442,664	30	922,258	20	1,088,617	23	1,026,871	21
Total ..	4,041,544	100	4,758,916	100	4,560,381	100	4,737,854	100	4,911,136	100

6. *Tonnage in Ballast.*—(i) *Total and Percentage by Nationality.* The following table shows the tonnage according to nationality of oversea vessels which entered and cleared Australia in ballast during the years 1919-20 to 1923-24 :—

OVERSEA SHIPPING, AUSTRALIA.—TONNAGE IN BALLAST, 1919-20 TO 1923-24.

Year.	Entered.			Cleared.		
	British.	Foreign.	Total.	British.	Foreign.	Total.
TOTAL TONNAGE.						
1919-20 ..	1,046,921	400,662	1,447,583	60,021	27,669	87,690
1920-21 ..	787,163	735,642	1,522,805	75,356	47,413	122,769
1921-22 ..	1,069,887	381,737	1,451,624	79,377	8,846	88,223
1922-23 ..	422,535	226,329	648,864	155,605	64,786	220,391
1923-24 ..	541,271	110,935	652,206	254,069	103,059	357,128
PERCENTAGE.						
1919-20 ..	33.30	44.62	35.82	1.90	3.12	2.17
1920-21 ..	23.74	50.99	32.00	2.27	3.32	2.59
1921-22 ..	29.41	41.39	31.83	2.22	0.93	1.95
1922-23 ..	11.58	20.79	13.70	4.49	6.23	4.89
1923-24 ..	13.93	10.80	13.28	6.48	9.45	7.13

(ii) *Tonnage entered in Ballast—States.* The tonnage which entered each State in ballast during 1923-24 was as follows:—

OVERSEA TONNAGE IN BALLAST ENTERING STATES, 1923-24.

State.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N. Ter.	Total.
Tonnage ..	463,631	7,471	19,393	42,343	107,862	11,506	..	652,206
Percentage on total ..	71.09	1.15	2.97	6.49	16.54	1.76	..	100.00

In normal times the large exports of coal from New South Wales afford special inducements to vessels in search of freights. The tonnage in ballast into New South Wales is mainly for coal cargo, into Victoria for wheat, into South Australia for wheat and ore, and into Western Australia for timber and wheat.

§ 3. Shipping of Ports.

1. *Tonnage Entered.*—Appended is an abstract of the total shipping tonnage—oversea, interstate, and coastwise—which entered the more important ports of Australia during the year 1923-24, together with similar information in regard to some of the ports of New Zealand for the year 1923 and of Great Britain for the year 1922:—

SHIPPING OF PORTS, AUSTRALIA, NEW ZEALAND, AND THE UNITED KINGDOM.

Port.	Tonnage Entered.	Port.	Tonnage Entered.
AUSTRALIA—		ENGLAND AND WALES—	
Sydney ..	9,022,037	London ..	19,752,927
Melbourne ..	6,918,101	Liverpool (inc. Birkenhead) ..	14,432,868
Newcastle ..	5,201,922	Tyne Ports ..	10,367,066
Adelaide ..	4,193,025	Cardiff ..	10,284,613
Brisbane ..	3,064,860	Southampton ..	7,983,627
Fremantle ..	2,707,991	Hull ..	5,676,848
Townsville ..	1,153,705	Plymouth ..	4,857,375
Hobart ..	757,078	Newport ..	3,477,570
Pirie ..	733,346	Swansea ..	3,290,378
Cairns ..	680,891	Bristol ..	3,044,611
Mackay ..	649,489	Sunderland ..	3,004,108
Geelong ..	602,818	Manchester (inc. Runcorn) ..	2,845,377
Kembla ..	571,732	Middlesbrough ..	2,775,180
Albany ..	516,091	Grimsby (inc. Immingham) ..	2,729,173
Bowen ..	482,627	Blyth ..	2,072,857
Burnie ..	449,792	Beaumaris (inc. Holyhead) ..	1,786,908
Rockhampton ..	433,949	Dover ..	1,557,576
Launceston ..	405,400	Falmouth ..	1,231,505
Devonport ..	387,104		
Thursday Island ..	327,611	SCOTLAND—	
Bunbury ..	298,007	Glasgow ..	5,389,298
Wallaroo ..	265,352	Leith ..	2,079,057
NEW ZEALAND—		IRELAND—	
Wellington ..	2,985,743	Cork (inc. Queenstown) ..	3,461,329
Auckland ..	2,134,918	Belfast ..	3,164,646
Lyttleton ..	1,850,219	Dublin ..	3,031,304
Otago ..	916,666		

§ 4. Vessels Built and Registered.

1. **Vessels Built.**—The following tables show the number and tonnage of vessels built in Australia during each of the calendar years 1920 to 1924, so far as such information can be ascertained from the Shipping Registers of the various States. The Merchant Shipping Act, under which vessels are registered in Australia, does not, however, make it compulsory to register vessels under 15 tons burthen if engaged in river or coastal trade. Larger vessels are also exempt from registration if not engaged in trade. Yachts and small trading vessels may be, and frequently are, registered at the request of the owners. As the Shipping Registers are the source of information, it follows that the figures given below will be subject to additions in the future, inasmuch as vessels already built may be added to the register at some future date.

VESSELS BUILT IN AUSTRALIA, 1920 TO 1924.

NUMBER.

Year.	Steamers built of—					Oil Motor Vessels.	Sailing.	Pontoons, Dredges, etc.	Total.
	Wood.	Iron.	Steel.	Com-posite.	Total.				
1920 ..	6	..	8	1	15	4	11	..	30
1921 ..	2	..	5	..	7	6	3	..	16
1922 ..	4	..	5	..	9	7	8	..	24
1923 ..	..	..	3	1	4	7	1	2	14
1924 ..	2	..	2	..	4	8	..	..	12

TONNAGE.

Year.	Steamers.		Oil Motor Vessels.		Sailing.		Pontoons, Dredges, etc.		Total.	
	Gross.	Net.	Gross.	Net.	Gross.	Net.	Gross.	Net.	Gross.	Net.
1920 ..	30,851	17,834	65	57	571	438	..	..	31,487	18,329
1921 ..	14,129	8,044	69	57	27	23	..	..	14,225	8,124
1922 ..	9,239	5,093	191	148	304	251	..	..	9,734	5,492
1923 ..	7,089	4,011	113	80	100	80	414	386	7,716	4,557
1924 ..	19,665	11,480	222	155	..	..	..	..	19,887	11,635

2. **Vessels Registered.**—The following table shows the number and net tonnage of steam, sailing, and other vessels on the registers of the States and of the Northern Territory on the 31st December, 1924 :—

VESSELS ON THE STATE REGISTERS, 31st DECEMBER, 1924.

State.	Steam.				Sailing.				Barges, Hulks, Dredges, etc., not Self-propelled.		Total.	
	Dredges and Tugs.		Other.		Fitted with Auxiliary Power.		Other.		No.	Net Tons.	No.	Net Tons.
	No.	Net Tons.	No.	Net Tons.	No.	Net Tons.	No.	Net Tons.				
New South Wales ..	49	1,386	564	171,671	122	1,931	244	15,718	44	9,136	1,023	190,842
Victoria ..	24	2,815	154	133,465	35	1,204	64	3,124	69	28,057	346	168,665
Queensland ..	19	2,799	67	22,626	27	317	118	1,983	32	4,405	263	32,130
South Australia ..	16	678	84	38,724	30	1,616	52	1,704	52	8,896	234	51,618
Western Australia ..	10	191	23	15,046	14	337	329	4,856	23	7,210	404	28,240
Tasmania ..	6	498	57	11,388	49	1,226	72	3,084	2	563	186	16,759
Northern Territory ..	..	..	..	..	1	17	24	310	..	..	25	327
Total ..	124	8,367	954	393,520	278	6,648	903	30,779	222	58,267	2,481	497,581

Particulars of the number of vessels on the Registers classified according to tonnage will be found in the Transport and Communication Bulletin issued by this Bureau.

§ 5. Interstate Shipping.

1. **System of Record.**—*Interstate Shipping* comprises two elements, viz.:—(a) Vessels engaged solely in interstate trade; and (b) Vessels trading between Australia and overseas countries and in the course of their voyage proceeding from one State to another. (It should be mentioned that these vessels, except under special circumstances, do not now engage in interstate carrying. A detailed explanation of the methods adopted in dealing with the returns under each heading will be found on page 272 of Official Year Book No. 17, but limitations of space preclude its repetition in the present volume.

2. **Vessels and Tonnage Entered.**—The following table gives the number and tonnage of vessels recorded as having entered each State from any other State during each of the years 1919–20 to 1923–24. The shipping on the Murray River, between the States of New South Wales, Victoria, and South Australia is not included.

INTERSTATE SHIPPING.—NUMBER AND TONNAGE OF VESSELS ENTERED, 1919–20 TO 1923–24.

State.	1919–20.	1920–21.	1921–22.	1922–23.	1923–24.
NUMBER.					
New South Wales ..	1,226	1,650	1,748	1,848	2,071
Victoria ..	1,269	1,614	1,797	1,886	1,920
Queensland ..	406	469	459	548	519
South Australia ..	456	603	724	822	867
Western Australia ..	367	431	484	364	363
Tasmania ..	787	987	1,072	1,169	1,193
Northern Territory ..	21	18	19	18	22
Total ..	4,532	5,772	6,303	6,655	6,955

TONNAGE.					
New South Wales ..	2,451,644	3,297,358	3,614,744	4,278,072	4,677,576
Victoria ..	2,017,798	2,434,778	3,091,313	3,581,571	3,724,273
Queensland ..	635,809	770,233	857,715	1,123,192	1,032,101
South Australia ..	1,215,970	1,554,649	1,949,071	2,453,776	2,501,928
Western Australia ..	1,364,866	1,600,142	1,817,361	1,630,730	1,668,713
Tasmania ..	441,660	592,852	937,296	1,023,645	1,200,569
Northern Territory ..	34,251	36,269	52,814	52,107	54,347
Total ..	8,161,998	10,286,281	12,320,314	14,143,093	14,859,507

3. **Oversea Vessels Moving Interstate.**—To ascertain the aggregate movement of shipping between the States during the year 1923–24, including the total interstate

movements of oversea vessels, the figures in the following table, which give the number and tonnage of vessels entered from or cleared for overseas countries *via* other Australian States, must be added to those in the table preceding :—

SHIPPING ENTERED AND CLEARED FROM AND TO OVERSEA COUNTRIES VIA OTHER AUSTRALIAN STATES, 1923-24.

State.	Entered.		Cleared.		Total.	
	Vessels.	Tonnage.	Vessels.	Tonnage.	Vessels.	Tonnage.
New South Wales ..	580	2,540,716	440	2,009,813	1,020	4,550,529
Victoria ..	555	2,453,458	406	1,860,075	961	4,313,533
Queensland ..	194	1,056,680	188	1,037,333	382	2,094,013
South Australia ..	314	1,498,180	271	1,297,749	585	2,795,929
Western Australia ..	27	93,391	16	55,950	43	149,341
Tasmania ..	45	164,133	69	370,196	114	534,329
Northern Territory ..	..	..	..	..	..	..
Total ..	1,715	7,806,558	1,390	6,631,116	3,105	14,437,674

Oversea vessels moving interstate are with few exceptions not engaged in the active interstate trade of Australia but are merely proceeding to the several States in continuation of their oversea voyage.

4. **Vessels engaged Solely in Interstate Trade.**—Eliminating all interstate movements of oversea vessels, the number and tonnage of vessels engaged solely in the interstate trade for Australia as a whole during the years 1919-20 to 1923-24 were as follows :—

NUMBER AND TONNAGE OF VESSELS ENGAGED SOLELY IN INTERSTATE TRADE, 1919-20 TO 1923-24.

Year.	Entered.		Cleared.	
	No.	Tons.	No.	Tons.
1919-20	3,482	3,939,055	3,510	3,986,345
1920-21	4,539	5,406,967	4,566	5,433,856
1921-22	4,897	6,464,999	4,885	6,335,396
1922-23	5,230	7,506,324	5,264	7,624,311
1923-24	5,565	8,228,391	5,546	8,109,094

5. **Total Interstate Movement of Shipping.**—(i) *Australia.* The appended table shows the total inward interstate movement of shipping for each of the years 1919-20 to 1923-24 :—

TOTAL INWARD INTERSTATE MOVEMENT OF SHIPPING, 1919-20 TO 1923-24.

Vessels.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
	Tons.	Tons.	Tons.	Tons.	Tons.
Oversea vessels moving interstate ..	8,741,260	10,001,668	11,579,340	14,214,800	14,437,674
Vessels solely interstate ..	3,939,055	5,406,967	6,464,999	7,506,324	8,228,391
Total ..	12,680,315	15,408,635	18,044,339	21,721,124	22,666,065

(ii) *States.* The following table shows the number and tonnage of vessels which entered and cleared each State during 1923-24, including the coastal movements of overseas vessels :—

INTERSTATE SHIPPING OF EACH STATE, 1923-24.

State.	Entered.		Cleared.	
	Vessels.	Tonnage.	Vessels.	Tonnage.
New South Wales	2,651	7,218,292	2,531	6,858,381
Victoria	2,475	6,177,731	2,576	6,448,593
Queensland	713	2,088,781	771	2,301,492
South Australia	1,181	4,000,108	1,219	4,070,938
Western Australia	390	1,762,104	315	1,481,676
Tasmania	1,238	1,364,702	1,219	1,333,038
Northern Territory	22	54,347	20	52,650
Total Australia	8,670	22,666,065	8,651	22,546,768

6. *Interstate and Coastal Services.*—The subjoined table gives particulars, so far as they are available, of all steamships engaged in regular interstate or coastal services at the end of each of the years 1920 to 1924 :—

AUSTRALIAN INTERSTATE AND COASTAL STEAMSHIP SERVICES, 1920 TO 1924.

Particulars.	1920.	1921.	1922.	1923.	1924.
Number of companies making returns	23	(a)39	32	35	39
Number of steamships	154	183	195	205	207
Tonnage .. { Gross	280,609	317,019	357,652	384,650	382,822
{ Net	159,293	179,393	204,219	220,042	217,609
Horse-power (Nominal)	29,557	32,801	34,886	36,934	37,841
Number of 1st class passengers	5,250	4,226	4,647	9,184	9,538
for which licensed 2nd class and steerage	5,632	4,642	5,016	4,756	4,343
Complement of Crew { Masters and officers	537	571	667	704	681
{ Engineers	464	551	607	645	631
{ Crew	4,502	4,613	5,175	5,614	5,336

(a) In this year a number of small organizations were included for the first time.

§ 6. Tonnage of Cargo.

The following table shows the aggregate tonnage of overseas cargo discharged and shipped in Australian ports, and the tonnage of interstate cargo shipped in all ports for the years 1919-20 to 1923-24 :—

AUSTRALIAN SHIPPING—CARGO MOVEMENT, 1919-20 TO 1923-24.

Year.	Overseas Cargo.		Interstate Cargo.
	Discharged.	Shipped.	Shipped.
	Tons.	Tons.	Tons.
1919-20	2,238,298	4,984,946	4,415,909
1920-21	3,201,215	5,925,133	4,993,678
1921-22	2,419,977	5,816,174	5,533,716
1922-23	3,718,795	4,064,196	5,137,651
1923-24	4,337,171	4,981,521	6,358,191

In the foregoing table cargo which was recorded in cubic feet has been converted to weight on the basis of 40 cubic feet to the ton.

§ 7. Commonwealth Government Shipping and Shipbuilding Activities.

1. **Local Building Programme.**—The original Commonwealth Government programme of ship construction in Australia provided for 48 vessels, 24 of which were to be wooden sailing vessels, and the remainder steel cargo ships. Owing to certain variations, the programme resulted in the building of 21 steel cargo vessels and 2 five-masted schooners with auxiliary power.

Particulars of the vessels built in Australia to 31st December, 1922, were included in a previous issue of this book (see Year Book No. 16, p. 273). Three vessels which have since been taken over, viz., the *Elouera* and the *Euroa*, of 1,916 and 1,922 tons net respectively, and the *Ferndale* (5,661 tons net) completed the shipbuilding programme.

2. **Vessels Built in the United Kingdom.**—In addition to the vessels previously referred to five steamers each approximately 8,450 tons net were constructed in yards in the United Kingdom.

These vessels have an approximate length of 520 feet by 68 feet beam, and a capacity of 900,000 cubic feet of which 370,000 cubic feet are insulated.

3. **Financial Position.**—The following statement shows the financial position of the Commonwealth Government shipping and shipbuilding activities as at 30th June, 1923, the latest date for which figures are available :—

<i>Capital Expenditure and Losses.</i>		<i>Profits, Recoveries, and Present Market Value of Fleet.</i>	
	£		£
Capital cost of vessels in commission	11,818,938	Gross profit on working of fleet to 30.6.23, less office expenses ..	2,493,449
Estimated cost of vessels in course of construction ..	2,338,000	Insurance reserve, less unexpired premiums and estimated claims outstanding	901,920
Capital cost of vessels lost and/or sold	807,808	Proceeds from sale of vessels ..	299,433
Interest paid and payable on overdraft	557,364	Amounts recovered on vessels lost at sea	791,897
Furniture, etc., at cost ..	11,232	Interest received from underwriters and purchasers on deferred payments on account of vessels lost or sold	1,738
Stores on hand	23,700	Profit on working of ex-enemy vessels	3,673,494
		Present day market value of fleet, etc.	4,749,350
		Balance—estimated total debit on all transactions	2,645,761
	<hr/> £15,557,042 <hr/>		<hr/> £15,557,042 <hr/>

4. **Australian Commonwealth Line of Steamers.**—(i) *Foundation of Line.* The Commonwealth Shipping Act 1923 provided for the establishment of the Australian Commonwealth Line of Steamers under the control of a Board of Directors consisting of not less than three nor more than five members. The date at which the Act was to come into force was fixed by proclamation as 1st September, 1923.

The whole of the right, title, and interest of the Commonwealth in and to the 50 vessels (155,302 tons net) of the Commonwealth Government Line of Steamers, and appurtenances used for the purposes of such vessels, were vested in the Board, also four other vessels (15,442 tons net) which were under construction at the time of transfer. The valuation of the vessels, tackle, apparel, gear, furniture, stores and equipment was fixed at £4,718,150, office furniture and fittings at £7,500, and stores on hand £23,700, making a total of £4,749,350.

(ii) *Disposal of Vessels.* Since the advent of the Board of Directors, 25 vessels have been disposed of, 9 of which passed to Japanese owners.

(iii) *Particulars of Operations.*—The profit and loss account of the Commonwealth Government Line of Steamers shows that for the year ended 30th June, 1922, the gross earnings of the fleet were £2,274,204, while the gross expenditure amounted to £3,445,773—a net loss of £1,171,569. For the year ended 30th June, 1923, the earnings and expenditure (plus interest and depreciation) were estimated to amount to £2,529,800 and £4,155,950 respectively, thus showing a net loss of £1,626,150.

§ 8. World's Shipping Tonnage.

The table hereunder shows the number and gross tonnage of steam and motor, and sailing vessels owned by several of the most important maritime countries, together with the proportion of the grand total owned by each country:—

WORLD'S SHIPPING TONNAGE, 1924-25.

Nationality.	Steam and Motor.		Sailing.		Total.		Percentage on Total.	
	No.	Gross Tonnage.	No.	Gross Tonnage.	No.	Gross Tonnage.	No.	Gross Tonnage.
Great Britain and Nthn. Ireland	8,169	18,954,158	390	151,680	8,559	19,105,838	26.49	31.11
Australia and New Zealand	628	798,833	22	10,011	650	808,844	2.01	1.32
Canada (a) ..	537	823,445	274	108,393	811	931,838	2.51	1.52
Other British ..	630	712,838	243	61,738	873	774,576	2.70	1.26
Total, British Empire ..	9,964	21,289,274	929	331,822	10,893	21,621,096	33.71	35.21
Belgium ..	247	556,091	4	4,506	251	560,597	0.77	0.91
Denmark ..	622	989,703	142	46,240	764	1,035,943	2.36	1.69
France ..	1,540	3,289,834	317	208,399	1,857	3,498,233	5.75	5.70
Germany ..	1,906	2,872,220	97	81,451	2,003	2,953,671	6.20	4.81
Greece ..	396	756,912	13	4,298	409	761,210	1.26	1.24
Holland ..	1,027	2,542,180	55	14,237	1,082	2,556,417	3.35	4.16
Italy ..	971	2,718,606	328	113,606	1,299	2,832,212	4.02	4.61
Japan ..	2,055	3,842,707	..	..	2,055	3,842,707	6.36	6.26
Norway ..	1,664	2,392,404	89	112,989	1,753	2,505,393	5.42	4.08
Spain ..	800	1,187,900	150	51,621	950	1,239,521	2.94	2.02
Sweden ..	1,197	1,191,076	208	63,474	1,405	1,254,550	4.35	2.04
United States of America (b) ..	3,588	12,495,403	1,016	1,100,100	4,604	13,595,503	14.25	22.14
Other Foreign Countries ..	2,434	2,857,149	558	290,497	2,992	3,147,646	9.26	5.13
Total, Foreign Countries ..	18,447	37,692,185	2,977	2,001,418	21,424	39,783,603	66.29	64.79
Grand Total ..	28,411	58,981,459	3,906	2,423,240	32,317	61,404,699	100.00	100.00

(a) Sea-going.

(b) Including Philippine Islands.

It should be mentioned that the foregoing figures have been compiled from Lloyd's Register of Shipping, and vessels of 100 tons or upwards only have been included.

§ 9. Ferries.

1. *General.*—In earlier issues of the Year Book particulars of ferries were included in the sub-section dealing with tramways, as the ferries are mainly a supplementary means of transport to the suburban railway and tramway systems.

2. *New South Wales.*—The ferry services in Port Jackson are under the control of two companies which during the year 1924 had 64 vessels in commission, 62 of which were double-ended screw steamers, the remaining two being motor driven. It is claimed for the steamers that they are superior in size and equipment to boats employed on similar service in any other part of the world.

3. **Victoria.**—The Williamstown City Council owns one steamer which is engaged in the transport of passengers between Port Melbourne and Williamstown. There are several other steamers which are engaged during the summer season in the carriage of passengers and goods to the several seaside resorts. Particulars of these services, however, are not included in the table in sub-par. 7 following.

4. **Queensland.**—The Brisbane City Council and the Balmoral Shire Council control the ferry services in the Metropolitan area. During the year 1924, 13 vessels were employed, 4 of which were steam-propelled.

5. **Western Australia.**—The ferries plying on the Swan River during 1924 were operated by a private company, and consisted of 8 petrol-driven vessels. At South Perth the Western Australian Government employed 4 vessels, 2 of which were steamers.

6. **Tasmania.**—In and around Hobart there were in 1924, 3 ferry services, 2 being controlled by a private company which had 6 steamers in commission, and 1 by the Public Works Department, with 2 motor-propelled vessels.

7. **Particulars of Working.**—The subjoined table shows for the year 1924 so far as returns are available the most important items in connexion with the operation of the ferry services in the several States :—

FERRIES.—PARTICULARS OF WORKING, 1924.

Particulars.	New South Wales.	Victoria.	Queensland.	Western Australia.	Tasmania.	Total.
Boats in Service—						
Steam .. No.	62	1	4	2	6	75
Other .. No.	2	..	9	10	2	23
Total .. No.	64	1	13	12	8	98
Number of passengers which boats are licensed to carry .. No.	45,576	352	995	1,757	1,879	50,559
Revenue .. £	714,851	6,668	7,670	14,785	19,688	763,662
Working Expenses .. £	623,856	8,392	25,715	12,709	18,305	688,977
Passengers carried (b) No.	41,824,626	(b)195,000	3,839,523	1,060,910	1,353,918	48,273,977
Mileage of Boats .. miles	(a)195,721	19,250	(a)30,900	82,921	57,595	(a)385,487
Accidents—						
Killed .. No.	..	..	1	..	..	1
Injured .. No.	98	..	..	..	..	98
Employees—						
Salaried Staff .. No.	34	..	4	2	7	47
Wages Staff .. No.	1,112	6	39	23	30	1,210

(a) Incomplete.

(b) Approximate.

8. **Other Services.**—In addition to the foregoing there are throughout the several States a number of row-boat ferry services, and on many of the principal inland rivers punts are in operation.

§ 10. Miscellaneous.

1. **Lighthouses.**—Transport and Communication Bulletin No. 14, published by this Bureau, contains a list of the principal lighthouses on the coast of Australia, giving details of the location, number, colour, character, period, candle-power, and visibility of each light so far as particulars are available.

2. **Distances by Sea.**—A statement giving the distances by sea between the ports of the capital cities of Australia and the most important ports in other countries which trade with Australia has also been included in the Transport and Communication Bulletin No. 14.

3. **Shipping Freight Rates.**—The Quarterly Summary of Australian Statistics gives a list of the ruling freight rates for general merchandise both in respect of overseas and interstate shipments. The latest figures available, which give the rates current at 31st March, 1925, show that the rate for general merchandise from Australia to United Kingdom and Continent was 70s. per ton weight or measurement, as compared with 55s. per ton in 1915.

4. **Depth of Water at Main Ports.**—A table compiled from information supplied by the Navigation Branch of the Department of Trade and Customs, showing the depth of water at the main ports of Australia at 1st January, 1925, has been included in the Transport and Communication Bulletin No. 16, published by this Bureau.

5. **Shipping Casualties.**—Courts of Marine Inquiry are constituted by a Magistrate, assisted by skilled assessors, and when necessary are held at the principal port in each State and also at Launceston (Tasmania). Such courts have power to deal with the certificates of officers found to be at fault. Particulars of shipping casualties reported on or near the coast during the year 1923–24 are shown in the Transport and Communication Bulletin No. 16. This information has also been furnished by the Navigation Branch.

6. **Commonwealth Navigation and Shipping Legislation.**—(i) *General.* An account, in some detail, of the Commonwealth Navigation and Shipping Legislation was published in Official Year Book No. 17 (pp. 1053–5), but considerations of space preclude its repetition in this present volume.

(ii) *Certificates of Competency.—Mercantile Marine.* Since 1st October, 1923, the Commonwealth Navigation Service has conducted examinations in Sydney, Melbourne, Brisbane, Port Adelaide, Fremantle, and Hobart for certificates of competency as master, mate, and engineer. Foreign-going certificates issued in Australia in respect of these officers are equivalent to similar certificates issued by the Board of Trade, and are valid throughout the British Empire.

(iii) *Survey of Ships.*—Surveys of passenger steamers under the Navigation Act are effected on similar lines to surveys of vessels under the Board of Trade rules in the United Kingdom. As in the case of certificates of competency, certificates granted by the Commonwealth Government are valid throughout the British Empire.

B. RAILWAYS.

§ 1. General.

1. **Introduction.**—In the issues of the Official Year Book, Nos. 1 to 7, the statistics of all Government railway systems were treated under the head of *Government Railways*. In subsequent issues, including the present volume, the greater part of the statistics relating to State-owned lines is dealt with separately from those under the control of the Commonwealth Government. The State railways are referred to throughout as “State” and the Commonwealth railways as “Federal” railways. A summary in regard to Federal and State railways will, however, be found in § 4 of this section.

In all tables relating to Government Railways, the particulars quoted, except where otherwise stated, are for the financial years.

2. **Improvement of Railway Statistics.**—Some of the earlier issues of the Year Book contain a condensation of the report issued in 1909 by the Commonwealth Statistician to the Minister for Home Affairs on the subject of *The Desirability of Improved Statistics of Government Railways in Australia* (see Year Book No. 7, page 598).

This matter has received the close consideration of the Railways Commissioners, and a considerable improvement, both as regards the volume of information and the mode of presentation thereof in the statistical tables appearing in the reports of the several Railways Commissioners, has been made during the past few years.

3. **Railway Communication in Australia.**—(i) *General.* An account of the progress of railway construction in Australia since the opening of the first line in 1854 will be found in Year Book No. 6, p. 681. In the eastern, south-eastern, and southern parts of Australia there is now a network of railway lines converging from the various agricultural, pastoral, and mining districts towards the principal ports, which are themselves connected by systems of lines running approximately parallel to the coast. In the east, lines radiating from Cairns, Townsville, Rockhampton, Brisbane, and Sydney extend inland in various directions for distances ranging up to over 600 miles; in the south-east there are numerous lines, those in Victoria converging towards Melbourne, while others in New South Wales have their terminus in Sydney; in the south there are four main lines,

with numerous branches, running from Melbourne; while from Adelaide one main line, with several branches to the coastal towns, runs inland in a northerly direction for a distance of nearly 700 miles, and another line runs in a south easterly direction to various ports, meeting the main line from Melbourne on the border of South Australia and Victoria near Serviceton. The South Australian and Victorian railway systems also meet on the border at two other points, one near Pinnaroo, and the other at Rennick, near Mount Gambier.

In Western Australia there is a connected system of main or trunk lines between the ports of the State and the agricultural, pastoral, and mining districts, and two short lines, one on the north-west, the other on the south coast, which are unconnected with the main system. In the northern portion of Queensland there are also several disconnected lines running inland from the more important ports. When, however, the sections of the North Coast line between Lilypond and Feluga are completed an uninterrupted service as far north as Cairns will be established. In Tasmania the principal towns are connected by a system of lines, and there are also, more especially in the western districts, several lines which have been constructed for the purpose of opening up mining districts.

By the opening, in 1917, of the Trans-Australian railway from Port Augusta to Kalgoorlie, through communication by rail was established between the eastern States and the Western Australian railway system.

(ii) *The Main Interstate Lines.* The main interstate lines, which permit of direct communication between the five capital cities—Brisbane, Sydney, Melbourne, Adelaide, and Perth—cover a distance from end to end of 3,474.80 miles or 3,479.82 miles via Newcastle. The scheduled time for the journey from Brisbane to Perth is six days one hour forty-two minutes, and from Perth to Brisbane five days twenty-one hours forty minutes, the time in each case being taken over all.

The longest railway journey which can be undertaken in Australia on one continuous line of railway is from Dajarra in Queensland to Meekatharra in Western Australia, a total distance of 5,499.11 miles.

4. *Non-conformity of Gauge.*—(i) *General.* With but few exceptions, all the railway lines in Australia open for general traffic are now owned and managed by the respective States in whose territory they run, or by the Commonwealth Government; but, unfortunately for the purpose of interstate traffic, the construction of the various systems in different parts of Australia has proceeded without uniformity of gauge. A statement giving the reasons for the adoption of the various gauges in the several States appeared in Year Book No. 15, p. 534, but considerations of space preclude its repetition in the present issue.

(ii) *Interstate Junctions.* Connexions at border stations were established as follows:—Victoria and New South Wales, at Albury, 14th June, 1883; Victoria and South Australia, at Serviceton, 19th January, 1887; and New South Wales and Queensland, at Wallangarra, 16th January, 1888. Through trains were unable to run on this latter section until the completion of the Hawkesbury River Bridge on 1st May, 1889. On the 22nd October, 1917, through communication from east to west was made possible by the opening of the Trans-Australian line.

(iii) *Proposals for Unification.* The question of the unification of gauges in the several States has been under consideration for several years, and numerous conferences on the subject have been held from time to time between the several Railways Commissioners and between the Premiers of the States concerned. Reference to these conferences has been made in previous issues of the Year Book.

(iv) *Estimated Cost of Unification of Gauges.* The scheme advocated by the Royal Commission of 8th February, 1921, and adopted by the Prime Minister and Premiers of the several States in conference during November of the same year, as the first step will provide a standard 4-ft. 8½-in. gauge railway between Brisbane and Fremantle, and the conversion of the whole of the broad-gauge lines of Victoria and South Australia, at an estimated cost of £21,600,000, spread over a period of approximately eight years. The details of the estimate of £21,600,000, which provides for a main trunk line between Fremantle and Brisbane, and the conversion of the 5-ft. 3-in. gauge lines in Victoria and South Australia, together with the quota from each State and the Commonwealth

Government in terms of the allocation of cost agreed upon, were given in a previous issue (see Year Book No. 16, p. 278.)

The estimated cost of converting the whole of the lines in the States concerned is approximately £57,200,000.

5. Rolling Stock Gauges.—Allied to the question of the gauges of the railways of Australia is that of the rolling stock gauges in use, the rolling stock gauge being the maximum transverse dimensions to which the rolling stock may be constructed. The following table gives particulars of the present rolling stock gauges, together with the maximum lengths and weights of vehicles :—

RAILWAYS, STATE AND FEDERAL.—ROLLING STOCK GAUGES, 1923-24.

PASSENGER ROLLING STOCK.

Railway.	Gauge of Track.	Maximum Rolling Stock Gauge.		Length over all.	Maximum—	
		Width.	Height above Rail Level.		Tare.	Carrying Capacity.
	ft. in.	ft. in.	ft. in.	ft. in.	t. c. q.	persons.
New South Wales ..	4 8½	10 6	14 0	74 4½	44 2 1	90
Victoria ..	5 3	10 0	14 0	74 1½	47 16 0	94
" ..	2 6	7 0½	10 4½	31 8	8 11 0	40
Queensland ..	3 6	9 4	12 9	55 5	27 10 0	90
" ..	2 0	6 3½	10 0	22 0	4 0 0	24
South Australia ..	5 3	10 4½	14 1½	74 1½	40 11 0	76
" ..	3 6	9 4½	12 1	62 6	24 18 0	60
Western Australia ..	3 6	8 10	12 7	61 9	31 10 0	90
Tasmania ..	3 6	9 6	12 5	64 0	30 0 0	110
" ..	2 0	6 6	10 0	30 2	5 10 1	24
Federal—						
Trans-Australian ..	4 8½	10 6	14 6	78 11½	48 0 0	34 (a)
Northern Territory ..	3 6	9 4	12 9	56 0	15 6 1	40
Oodnadatta ..	3 6	9 4½	12 1	62 6	24 18 0	60

(a) Sleeping berths.

GOODS ROLLING STOCK.

Railway.	Gauge of Track.	Maximum Rolling Stock Gauge.		Length over all.	Maximum—	
		Width.	Height above Rail Level.		Tare.	Carrying Capacity.
	ft. in.	ft. in.	ft. in.	ft. in.	t. c. q.	t. c. q.
New South Wales ..	4 8½	9 8	13 6	60 11	23 3 0	45 0 0
Victoria ..	5 3	9 7½	13 7½	55 4½	20 14 2	30 0 0
" ..	2 6	6 5½	9 7½	27 3½	7 12 2½	10 0 0
Queensland ..	3 6	8 9	12 0	45 5	15 0 0	21 8 0
" ..	2 0	6 6	9 0	22 0	5 0 0	16 0 0
South Australia ..	5 3	10 0½	12 10½	52 1	23 10 0	30 0 0
" ..	3 6	8 6	12 5½	52 9	22 0 0	25 0 0
Western Australia ..	3 6	8 8	12 6	44 9	17 10 0	27 0 0
Tasmania ..	3 6	8 6	11 0	40 10	12 5 0	30 0 0
" ..	2 0	6 0	6 6	27 0	5 15 2	20 0 0
Federal—						
Trans-Australian ..	4 8½	10 6	14 6	47 6½	15 0 0	40 0 0
Northern Territory ..	3 6	9 4	12 9	34 6	9 10 0	12 0 0
Oodnadatta ..	3 6	8 6	12 5½	52 9	22 0 0	25 0 0

In the above tables the transverse dimensions given are the greatest employed on any vehicle.

It will be observed that the dimensions adopted by the Federal Government for the Trans-Australian Railway are in excess of those at present in use on the 5-ft. 3-in. gauge lines of Victoria and South Australia, and the 4-ft. 8½-in. gauge lines of New South Wales. It is, however, the intention of the latter State to adopt the Federal standard as soon as possible, and with that end in view a commencement has been made in the Sydney suburban area with the enlargement of bridges, tunnels, buildings and platforms to enable the larger rolling stock to be employed. The question of standard couplings on the New South Wales lines is also receiving attention.

6. Mileage Open for Traffic, all Lines.—(i) *General.* In all the States the principle that the control, construction, and maintenance of the railways should be in the hands of the Government has long been adhered to, excepting in cases presenting unusual circumstances. In various parts of Australia, lines have been constructed and managed by private companies, but at the present time nearly the whole of the railway traffic is in the hands of the State or Commonwealth Governments. A large proportion of the private lines has been laid down for the purpose of opening up forest lands, mining districts, or sugar areas, and these lines are not generally used for the conveyance of passengers or the public conveyance of goods. (See § 5 *Private Railways*, hereinafter.)

The subjoined table shows the mileage of Commonwealth Government, State Government, and private lines open for traffic (exclusive of sidings and cross-overs) in each State for each of the years 1919-20 to 1923-24. The railway mileage given for each State includes both Commonwealth and State Government railways in that State, and in this table and in those immediately following is estimated from the geographic point of view and not from that of ownership. The figures are to the end of the financial year ending on the 30th June, excepting the mileages for private lines, which are in most cases taken for the calendar year :—

RAILWAYS.—GOVERNMENT AND PRIVATE.—MILEAGE OPEN, 1920 TO 1924.

State or Territory.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
	Miles.	Miles.	Miles.	Miles.	Miles.
New South Wales	5,376.99	5,402.08	5,475.44	5,689.18	5,847.13
Victoria	4,284.65	4,337.35	4,374.73	4,393.48	4,496.34
Queensland	6,946.69	7,012.62	7,063.89	7,180.10	7,341.83
South Australia	3,458.26	3,463.35	3,487.37	3,503.40	3,577.01
Western Australia	4,846.02	4,905.83	4,867.48	4,844.93	4,908.77
Tasmania	840.25	877.01	872.49	896.36	908.38
Federal Capital Territory ..	4.94	4.94	4.94	4.94	4.94
Northern Territory ..	198.68	198.68	198.68	198.68	198.68
Australia	25,956.48	26,201.86	26,345.02	26,711.07	27,283.08

In previous issues of the Year Book particulars were given for different periods from 1855 onwards. (See No. 15, page 537.)

(ii) *Government and Private Lines Separately.* The subjoined table shows for each State (a) the length of lines owned by the State Government, and by the Commonwealth Government in that State, all of which lines are open for general use by the public, (b) the

length of private lines available for general use by the public, and (c) the length of the private lines not so available. The mileages specified in the case of Government lines are to the 30th June, 1924; those given for private lines are to the same date, with the exception of Western Australia, which are to 31st December, 1924 :—

RAILWAYS.—GOVERNMENT AND PRIVATE.—MILEAGE CLASSIFIED, 1923-24.

State or Territory.	Government Lines—		Private Lines available for General Traffic.	Total Open for General Traffic.	Private Lines used for special Purposes only.	Grand Total.
	State.	Federal.				
	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.
New South Wales	5,522.80	..	143.38	5,666.18	180.95	5,847.13
Victoria ..	4,434.68	..	27.74	4,462.42	33.92	4,496.34
Queensland ..	6,039.96	..	286.06	6,326.02	1,015.81	7,341.83
South Australia ..	2,451.70	1,075.41	33.80	3,560.91	16.10	3,577.01
Western Australia	3,628.83	453.99	278.35	4,361.17	547.60	4,908.77
Tasmania ..	672.90	..	194.86	867.76	40.62	908.38
Federal Capital Territory ..	..	4.94	..	4.94	..	4.94
Northern Territory	..	198.68	..	198.68	..	198.68
Australia ..	22,750.87	1,733.02	964.19	25,448.08	1,835.00	27,283.08

7. *Comparative Railway Facilities.*—The relation to population and area respectively of the mileage of line open to the public for general traffic (including both Government and private lines) on the 30th June, 1924, are shown in the subjoined statement :—

RAILWAYS.—GOVERNMENT AND PRIVATE.—COMPARISON OF FACILITIES, 1924.

Particulars.	N.S.W.	Vic.	Q'ld.	S.A.	W.A.	Tas.	Nor. Ter.	Fed. Cap. Ter.	Aust.
Mileage of Railway—									
Per 1,000 of population ..	2.54	2.72	7.64	6.73	12.10	4.07	1.34	54.79	4.38
Per 100 sq. miles of Territory ..	18.31	50.78	9.44	9.37	4.47	33.10	5.26	0.38	8.55

8. *Classification of Lines according to Gauge, 1923-24.*—The next table gives a classification, according to gauge, of the total mileage, exclusive of sidings and cross-overs, of (i) Commonwealth Government railways, given in the State or Territory in which situated; (ii) State Government railways; (iii) Private railways open to the public for general traffic; and (iv) Private lines open for special purposes. Particulars of Government railways are up to the 30th June, 1924, of private railways open for general traffic to the 31st December, 1924, as nearly as possible, and of private railways open for special purposes to the 30th June, 1924, with the exception of Western Australia, the figures for which State are to the 31st December, 1924.

RAILWAYS.—GOVERNMENT AND PRIVATE.—GAUGES, 1923-24.

State or Territory in which situated.	Route mileage having a gauge of—								Total.
	5 ft. 3 in.	4 ft. 8½ in.	3 ft. 6 in.	3 ft. 0 in.	2 ft. 6 in.	2 ft. 3 in.	2 ft. 0 in.	1 ft. 8 in.	

FEDERAL RAILWAYS.

	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.
South Australia	527.46	477.95	..	..	..	..	..	1,075.41
Western Australia	453.99	..	..	..	..	..	..	453.99
Federal Capital Territory	4.94	..	..	..	..	..	..	4.94
Northern Territory	198.68	..	..	..	..	..	198.68
Total	1,056.39	676.63	..	..	..	..	..	1,733.02

STATE RAILWAYS.

	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.
New South Wales ..	..	5,483.29	39.51	..	..	..	..	..	5,522.80
Victoria ..	4,312.91	..	..	..	121.77	..	..	..	4,434.68
Queensland ..	..	..	6,000.70	..	..	..	30.26	..	6,039.96
South Australia ..	1,190.46	..	1,261.24	..	..	..	..	..	2,451.70
Western Australia ..	..	..	3,628.83	..	..	..	..	..	3,628.83
Tasmania ..	..	..	648.07	..	..	..	24.83	..	672.90
Total ..	5,503.37	5,483.29	11,587.35	..	121.77	..	55.09	..	22,750.87

PRIVATE RAILWAYS OPEN FOR GENERAL TRAFFIC.

	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.
New South Wales ..	..	80.46	36.67	..	..	..	26.25	..	143.38
Victoria ..	16.74	..	..	11.00	..	..	..	..	27.74
Queensland ..	..	..	120.72	..	7.00	..	158.34	..	286.06
South Australia ..	..	..	33.80	..	..	..	..	..	33.80
Western Australia ..	..	..	278.35	..	..	..	..	..	278.35
Tasmania ..	..	..	178.37	..	..	..	16.49	..	194.86
Total ..	16.74	80.46	647.91	11.00	7.00	..	201.08	..	964.19

PRIVATE RAILWAYS OPEN FOR SPECIAL PURPOSES.

	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.
New South Wales ..	..	167.19	3.50	..	..	..	10.26	..	180.95
Victoria ..	16.82	..	..	4.50	..	..	12.60	..	33.92
Queensland ..	..	..	243.23	..	205.50	..	567.08	..	1,015.81
South Australia ..	..	..	..	..	2.00	3.75	10.35	..	16.10
Western Australia ..	..	..	502.60	..	..	..	14.00	31.00	547.60
Tasmania ..	..	..	23.54	..	..	..	17.08	..	40.62
Total ..	16.82	167.19	772.87	4.50	207.50	3.75	631.37	31.00	1,835.00

ALL RAILWAYS.

	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.
New South Wales ..	..	5,730.94	79.68	..	..	..	36.51	..	5,847.13
Victoria ..	4,346.47	..	..	15.50	121.77	..	12.60	..	4,496.34
Queensland ..	..	..	6,373.65	..	212.50	..	755.68	..	7,341.83
South Australia ..	1,190.46	597.46	1,772.99	..	2.00	3.75	10.35	..	3,577.01
Western Australia ..	..	453.99	4,409.78	..	..	..	14.00	31.00	4,908.77
Tasmania ..	..	..	849.98	..	..	..	58.40	..	908.38
Federal Capital Territory ..	..	4.94	..	..	..	..	..	..	4.94
Northern Territory ..	..	..	198.68	..	..	..	..	..	198.68
GRAND TOTAL	5,536.93	6,787.33	13,684.76	15.50	336.27	3.75	887.54	31.00	27,283.08

§ 2. Federal Railways.

1. *General*.—On the 1st January, 1911, the Commonwealth Government took over the Northern Territory from the South Australian Government, and at the same time the railways from Darwin to Pine Creek in the Northern Territory, and from Port Augusta to Oodnadatta in South Australia, came under its control. Subsequently the construction of a transcontinental line from Port Augusta in South Australia to Kalgoorlie in Western Australia was undertaken by the Commonwealth Government, while a line has been constructed in the Federal Capital Territory, connecting Canberra with the New South Wales railway system at Queanbeyan. In 1917 an Act was passed by which all the Federal railways were vested in a Commonwealth Railways Commissioner.

2. *Northern Territory Railway*.—(i) *Darwin to Katherine*. On the 1st January, 1911, the line from Darwin to Pine Creek came under the jurisdiction of the then Department of External Affairs, and was worked under the Administrator of the Northern Territory. As mentioned above, the management of this railway is now vested in the Commonwealth Railways Commissioner.

In the Northern Territory Acceptance Act the construction of a transcontinental line from South Australia is provided for. The extension of the line from Pine Creek to Katherine River was completed, and the first train ran through to Emungalan (Katherine River) on 13th May, 1917.

(ii) *Proposed Extension*. The selection of the route of the transcontinental line from North to South has been the subject of investigations by the Parliamentary Standing Committee on Public Works which, after a tour of inspection and the taking of a mass of evidence, recommended to Parliament that—

- (a) the existing line (Darwin to Emungalan) be extended to Daly Waters on the understanding that it is to form portion of an eventual line through Newcastle Waters to Camooweal ;
- (b) a light low-level line be constructed from Oodnadatta to Alice Springs ;
- (c) these lines be regarded as providing sufficient railway development for the Northern Territory for some years ;
- (d) the 3 ft. 6 in. gauge be adopted.

Several other recommendations relative to sleepers and rails, bridges, labour, and the developmental policy of the Northern Territory were also submitted.

(iii) *Line Authorized for Construction*. The Northern Territory Railway Extension Act 1923 provides for the construction of a 3 ft. 6 in. gauge line from the present terminus Emungalan to Daly Waters, a distance of approximately 160 miles. The estimated cost of this line is £1,545,000, which includes the cost of a bridge over the Katherine River estimated at £95,000. Approximately 77 miles of this extension have been permanently surveyed.

3. *Port Augusta to Oodnadatta Railway*.—This line was taken over by the Commonwealth Government from 1st January, 1911, but was held under lease by the South Australian Government until 31st December, 1913. From the 1st January, 1914, the line was worked under agreement by the South Australian Government for and on behalf of the Commonwealth, but from 1st January, 1925, the management devolved upon the Commonwealth Railways Commissioner. It was provided in the Northern Territory Acceptance Act that the Commonwealth should annually reimburse the State with the interest payable on the amount of loans raised by the State for the purpose of constructing the railway, and the agreement for working the line prescribed that the Commonwealth should be responsible to the State for any financial loss incurred by the State in the working and management of the railway, but should be entitled to receive from the State any profit made in such working and management.

4. *Federal Capital Territory Railway—Queanbeyan-Canberra*.—This line was built by the Railway Construction Branch of the Public Works Department, New South Wales, and was completed and taken over by the Chief Commissioner of Railways for that State, who has since worked the line for and on behalf of the Commonwealth Government. The line was opened for departmental goods traffic on 25th May, 1914. It connects with the New South Wales railway system at Queanbeyan, is 4.94 miles in length, and has sidings of an aggregate length of 2.00 miles.

5. **Trans-Australian Railway (Kalgoorlie to Port Augusta).**—In the issue of the Year Book for 1918 (No. 11, pp. 663 to 666 and p. 1213), a short history of the construction of the Trans-Australian line is given, also a description of the country through which the line passes between Kalgoorlie and Port Augusta.

On the 22nd October, 1917, the first through train left Port Augusta with an official party on board for Kalgoorlie. It should be mentioned that owing to deviations from the original route, the length of this line was reduced from 1,063.39 miles to 1,051.45 miles, a saving of 11.94 miles.

6. **Lines Open, Surveyed, etc.**—The following table shows the lines open for traffic under the control of the Commonwealth Government at 30th June, 1924, together with the lines which have been or are being surveyed :—

RAILWAYS, FEDERAL, 30th JUNE, 1924.

Terminals.	Miles.
OPEN FOR TRAFFIC.	
Trans-Australian—Port Augusta (South Australia) to Kalgoorlie (Western Australia)	1,051.45
Port Augusta to Oodnadatta (South Australia)	477.95
Queanbeyan to Canberra (Federal Capital Territory)	4.94
Northern Territory Railway—Darwin to Emungalan, Katherine River ..	198.68
Total opened for traffic	1,733.02
SURVEYED, OR BEING SURVEYED.	
Katherine River to Mataranka (Northern Territory)	65.44
Mataranka to Daly Waters (Northern Territory)	95.00
Kingonya to Boorthanna (South Australia)	176.44
Canberra to Jervis Bay (Federal Capital Territory)	140.22
Canberra (Federal Capital Territory) to Federal Capital Territory Border in the direction of Yass (New South Wales)	11.67
Daly Waters (Northern Territory) to Oodnadatta (South Australia) ..	851.50
Port Augusta to Crystal Brook (South Australia)	69.25
Total surveyed or being surveyed	1,409.52

In addition a trial survey from the proposed deep water port at Rocky Island (Gulf of Carpentaria) to Borroloola is being undertaken in connexion with the possibility of developing a port at the mouth of the McArthur River.

7. **Mileage open, worked, and Train miles run.**—The following table shows the length of the Federal railways open for traffic, average miles worked, and the train miles run in the years 1920 to 1924 :—

RAILWAYS, FEDERAL.—MILEAGE OPEN, WORKED, AND TRAIN MILES, 1920 TO 1924.

Year ended 30th June—	Railway.				Total.
	Trans- Australian.	Oodnadatta.	Federal Capital Territory.	Northern Territory.	
MILES OPEN FOR TRAFFIC.					
	Miles.	Miles.	Miles.	Miles.	Miles.
1920	1,051	478	5	199	1,733
1921	1,051	478	5	199	1,733
1922	1,051	478	5	199	1,733
1923	1,051	478	5	199	1,733
1924	1,051	478	5	199	1,733

**RAILWAYS, FEDERAL.—MILEAGE OPEN, WORKED, AND TRAIN MILES,
1920 to 1924—continued.**

Year ended 30th June—	Railway.				Total.
	Trans- Australian.	Oodnadatta.	Federal Capital Territory.	Northern Territory.	
AVERAGE MILES WORKED.					
	Miles.	Miles.	Miles.	Miles.	Miles.
1920	1,051	478	5	199	1,733
1921	1,051	478	5	199	1,733
1922	1,051	478	5	199	1,733
1923	1,051	478	5	199	1,733
1924	1,051	478	5	199	1,733
TRAIN MILES RUN.					
1920	401,709	262,917	1,000	60,348	725,974
1921	472,290	320,292	1,058	17,270	810,910
1922	471,061	242,751	1,263	16,078	731,153
1923	449,609	303,187	1,065	20,823	774,684
1924	453,742	293,529	4,731	18,412	770,414

8. **Cost of Construction and Equipment.**—In the following table particulars are given of the cost of construction and equipment for traffic of the undermentioned railways for each of the years 1920 to 1924 :—

RAILWAYS, FEDERAL.—CAPITAL COST, 1920 TO 1924.

Year ended 30th June—	Railway.				Total.
	Trans- Australian.	Oodnadatta. (a)	Federal Capital Territory. (b)	Northern Territory.	
TOTAL COST OF CONSTRUCTION AND EQUIPMENT OF LINES OPEN.					
	£	£	£	£	£
1920	7,053,900	2,282,934	48,144	1,709,932	11,094,910
1921	7,137,365	2,287,193	48,144	1,711,585	11,184,287
1922	7,213,923	2,296,139	48,144	1,718,021	11,276,227
1923	7,301,433	2,309,136	48,144	1,725,666	11,384,379
1924	7,379,785	2,342,490	50,720	1,726,877	11,499,872
COST PER MILE OPEN.					
1920	6,710	4,776	9,746	8,607	6,402
1921	6,788	4,785	9,746	8,615	6,454
1922	6,861	4,804	9,746	8,647	6,507
1923	6,944	4,831	9,746	8,686	6,569
1924	7,019	4,901	10,267	8,692	6,636

(a) Exclusive of Rolling Stock the property of South Australian Government Railways.

(b) Exclusive of Rolling Stock the property of New South Wales Government Railways.

9. **Gross Revenue.**—(i) *Total, per average mile worked, and per train mile run.* The following table shows the total revenue from all sources, the revenue per average mile worked, and the revenue per train mile run for each of the undermentioned railways for the financial years 1920 to 1924 inclusive :—

RAILWAYS, FEDERAL.—GROSS REVENUE, TOTAL, ETC., 1920 TO 1924.

Year ended 30th June—	Railway.				Total.
	Trans-Australian.	Oodnadatta.	Federal Capital Territory.	Northern Territory.	
TOTAL GROSS REVENUE.					
	£	£	£	£	£
1920	213,388	74,709	571	27,089	315,757
1921	206,871	112,091	1,240	12,214	332,416
1922	206,826	99,462	1,847	14,364	322,499
1923	208,925	108,770	2,883	15,835	336,413
1924	227,420	105,124	4,080	16,802	353,426
GROSS REVENUE PER AVERAGE MILE WORKED.					
1920	203	156	116	136	182
1921	197	235	251	62	192
1922	197	208	374	72	186
1923	199	228	584	80	194
1924	216	220	826	85	204
GROSS REVENUE PER TRAIN-MILE RUN.					
	d.	d.	d.	d.	d.
1920	127.49	68.25	137.04	107.73	104.39
1921	105.12	83.99	281.29	169.74	98.38
1922	105.37	98.34	350.97	214.41	105.86
1923	111.52	86.10	649.69	182.51	104.22
1924	120.29	85.93	206.97	219.01	110.09

(ii) *Classification and Percentages.* The gross revenue is composed of (a) receipts from coaching traffic, including the carriage of mails, horses, parcels, etc., by passenger trains; (b) receipts from the carriage of goods and live stock; and (c) rents and miscellaneous items. The subjoined table shows the gross revenue for 1920 to 1924 classified according to the three chief sources of receipts, together with their percentages on the total revenue. The respective totals of the three items are given in the preceding table.

RAILWAYS, FEDERAL.—RECEIPTS, VARIOUS SOURCES, 1920 TO 1924.

Year ended 30th June—	Railway.									
	Trans-Australian.		Oodnadatta.		Federal Capital Territory.		Northern Territory.		Total.	
	Total.	Per Cent.	Total.	Per Cent.	Total.	Per Cent.	Total.	Per Cent.	Total.	Per Cent.
COACHING TRAFFIC RECEIPTS.										
	£	%	£	%	£	%	£	%	£	%
1920	95,671	44.83	10,600	14.19	15	2.83	4,433	16.36	110,719	35.07
1921	128,953	62.34	18,589	16.58	20	1.61	2,700	22.11	150,262	45.20
1922	139,192	67.30	19,689	19.78	48	2.60	2,685	18.69	161,594	50.11
1923	138,304	66.20	17,927	16.48	47	1.63	397	2.51	156,675	46.57
1924	144,352	63.48	17,764	16.90	754	18.48	2,778	16.53	165,648	46.87
GOODS AND LIVE STOCK RECEIPTS.										
	£	%	£	%	£	%	£	%	£	%
1920	82,490	38.67	61,401	82.19	453	79.33	14,930	55.12	159,274	50.44
1921	39,750	19.21	90,802	81.01	1,210	97.58	4,859	39.78	136,621	41.10
1922	31,081	15.03	76,710	77.12	1,779	96.32	5,194	36.16	114,764	35.58
1923	31,005	14.84	87,552	80.49	2,819	97.78	7,163	45.23	128,539	38.21
1924	34,486	15.16	84,278	80.17	3,326	81.52	6,141	36.55	128,231	36.29
MISCELLANEOUS RECEIPTS.										
	£	%	£	%	£	%	£	%	£	%
1920	35,227	16.50	2,708	3.62	103	18.04	7,726	28.52	45,764	14.49
1921	38,168	18.45	2,700	2.41	10	0.81	4,655	38.11	45,533	13.70
1922	36,553	17.07	3,053	3.10	20	1.08	6,485	45.15	46,141	14.31
1923	39,616	18.98	3,291	3.03	7	0.59	8,275	52.26	51,199	15.22
1924	48,582	21.86	3,092	2.93	..	..	7,883	46.92	59,547	16.84

The miscellaneous receipts for the year 1923–24 include an amount of £23,894 revenue from dining cars and refreshment services on the Trans-Australian Railway. A sum of £21,278 was received from this source during the previous year.

10. Working Expenses.—(i) *Total.* The following table shows the total working expenses, and the percentages on the corresponding gross revenues of each railway for each year from 1920 to 1924.

Details of the annual expenditure on (a) maintenance of ways, works and buildings, (b) locomotives, carriages and wagons repairs and renewals, (c) traffic expenses, and (d) compensation, general and miscellaneous charges, are given in (iii) following.

RAILWAYS, FEDERAL.—WORKING EXPENSES, TOTAL, ETC., 1920 TO 1924.

Year ended 30th June—	Railway.				Total.
	Trans-Australian.	Oodnadatta.	Federal Capital Territory.	Northern Territory.	
TOTAL WORKING EXPENSES.					
	£	£	£	£	£
1920	256,027	112,192	801	48,617	417,637
1921	298,209	172,552	655	27,551	498,967
1922	255,434	177,369	1,308	26,511	460,622
1923	250,280	178,181	1,588	30,984	461,033
1924	265,121	176,711	3,268	30,077	475,177
PERCENTAGE OF WORKING EXPENSES ON REVENUE.					
	%	%	%	%	%
1920	119.98	150.17	140.28	179.47	132.26
1921	144.15	153.94	52.82	225.57	150.10
1922	123.50	178.33	70.82	184.56	142.83
1923	119.79	163.81	55.08	195.67	137.04
1924	116.58	168.10	80.10	179.01	134.45

(ii) *Averages.* The following table gives the working expenses per average mile worked and per train-mile run for each railway for the years 1920 to 1924 :—

RAILWAYS, FEDERAL.—WORKING EXPENSES, AVERAGES, 1920 TO 1924.

Year ended 30th June—	Railway.				Total.
	Trans- Australian.	Oodnadatta.	Federal Capital Territory.	Northern Territory.	
WORKING EXPENSES PER AVERAGE MILE WORKED.					
	£	£	£	£	£
1920	243	235	162	245	241
1921	284	361	133	139	288
1922	243	371	265	133	266
1923	238	373	322	156	266
1924	252	370	662	151	274
WORKING EXPENSES PER TRAIN-MILE RUN.					
	d.	d.	d.	d.	d.
1920	152.96	102.41	192.40	193.34	138.07
1921	151.54	129.30	148.59	382.87	147.67
1922	130.14	175.36	248.55	395.73	151.20
1923	133.60	141.04	357.85	357.11	142.83
1924	140.23	144.48	165.78	392.04	148.03

(iii) *Classification and Percentages.* The subjoined table shows the distribution of working expenses among four chief heads of expenditure for the years 1920 to 1924, together with their percentages on the total working expenses which are given in 10 (i) hereinbefore :—

RAILWAYS, FEDERAL.—DISTRIBUTION OF WORKING EXPENSES, 1920 TO 1924.

Year ended 30th June—	Railway.								Total.	
	Trans-Australian.		Oodnadatta.		Federal Capital Territory.		Northern Territory.			
	Total.	Per Cent.	Total.	Per Cent.	Total.	Per Cent.	Total.	Per Cent.	Total.	Per Cent.

MAINTENANCE.

	£	%	£	%	£	%	£	%	£	%
1920 ..	72,197	28.20	43,967	39.19	553	69.04	20,664	42.51	137,381	32.89
1921 ..	99,559	33.38	57,920	33.57	254	38.78	13,236	48.04	170,969	34.27
1922 ..	75,941	29.73	78,780	44.42	736	56.27	14,683	55.38	170,140	36.94
1923 ..	72,822	29.10	83,014	46.59	810	51.01	16,350	52.77	172,996	37.52
1924 ..	77,892	29.38	71,087	40.23	711	21.76	13,858	46.08	163,548	34.42

LOCOMOTIVE, CARRIAGE, AND WAGON CHARGES.

1920 ..	119,753	46.77	53,437	47.63	196	24.47	19,841	40.81	193,227	46.27
1921 ..	128,680	43.15	94,381	54.70	340	51.91	9,269	33.64	232,670	46.63
1922 ..	112,317	43.97	79,640	44.90	508	38.84	4,848	18.29	197,313	42.84
1923 ..	110,652	44.21	73,476	41.24	721	45.40	7,528	24.30	192,377	41.73
1924 ..	115,107	43.42	84,029	47.55	1,900	58.14	8,179	27.19	209,215	44.03

TRAFFIC EXPENSES.

1920 ..	54,606	21.33	12,803	11.41	52	6.49	6,881	14.15	74,342	17.85
1921 ..	41,294	13.85	17,956	10.23	61	9.31	4,129	14.99	63,140	12.60
1922 ..	38,416	15.04	16,909	9.36	64	4.89	6,248	23.57	61,337	13.31
1923 ..	37,139	14.84	18,589	10.43	57	3.59	6,481	20.92	62,266	13.51
1924 ..	39,936	15.06	18,533	10.49	657	20.10	7,346	24.42	66,472	13.99

OTHER CHARGES.

1920 ..	9,471	3.70	1,985	1.77	..	..	1,231	2.53	12,687	3.04
1921 ..	28,676	9.62	2,595	1.50	..	..	917	3.33	32,188	6.45
1922 ..	28,760	11.26	2,340	1.32	..	..	732	2.76	31,832	6.91
1923 ..	29,667	11.85	3,102	1.74	..	..	625	2.01	33,394	7.24
1924 ..	32,186	12.14	3,062	1.73	..	..	694	2.31	35,942	7.56

11. *Passenger Journeys, and Tonnage of Goods and Live Stock.*—(i) *General.* In the next table particulars are given of the passenger journeys, and tonnage of goods and live stock carried on the Federal railways during the years 1920 to 1924 :—

RAILWAYS, FEDERAL.—TRAFFIC, 1920 TO 1924.

Year ended 30th June—	Railway.				Total.	
	Trans-Australian.	Oodnadatta.	Federal Capital Territory.	Northern Territory.		

PASSENGER JOURNEYS.

	No.	No.	No.	No.	No.
1920 ..	22,968	55,742	..	4,818	83,528
1921 ..	29,686	69,407	..	3,704	102,797
1922 ..	28,003	64,477	..	3,343	95,823
1923 ..	32,914	67,311	..	3,063	103,288
1924 ..	31,805	67,657	32,616	3,511	135,589

TONNAGE OF GOODS AND LIVE STOCK CARRIED.

	tons.	tons.	tons.	tons.	tons.
1920 ..	53,722	94,892	4,691	23,122	176,427
1921 ..	20,089	87,879	6,913	3,610	118,491
1922 ..	20,780	76,089	9,817	2,251	108,937
1923 ..	33,252	72,392	14,702	2,954	123,300
1924 ..	32,858	69,179	18,504	3,167	123,708

(ii) *Passenger Mileage Summary.* The appended table gives particulars of "Passenger-Mileage" on each of the Federal Railways for the year 1923-24 :—

RAILWAYS, FEDERAL.—PASSENGER-MILES SUMMARY, 1923-24.

Railway.	Passenger Train Mileage.	Number of Passenger Journeys.	Total "Passenger-Miles."	Amount Received from Passengers.	Average Number of Passengers carried per Train Mile.	Average Mileage per Passenger Journey.	Average Earnings per "Passenger-Mile."	Average Fare per Passenger Journey.	Density of Traffic per Average Mile Worked.
			,000 omitted.	£		Miles.	d.	£ s. d.	
Trans-Australian ..	371,371	31,805	26,339	122,112	71	828	1.11	3 16 9	25,051
Oodnadatta ..	53,089	67,857	2,505	14,014	47	37	1.34	0 4 2	5,241
Federal Capital Territory ..	1,427	32,616	136	664	95	4	1.17	0 0 5	27,473
Northern Territory ..	5,982	3,511	290	2,412	49	83	1.99	0 13 9	1,461

(iii) *Ton-Mileage Summary.* Particulars of ton-mileage are shown hereunder in respect of each of the Federal Railways for the year 1923-24 :—

RAILWAYS, FEDERAL.—"TON-MILEAGE" SUMMARY, 1923-24.

Railway.	Goods Train Mileage.	Total Tons Carried.	Total "Ton-Miles."	Goods Earnings.	Average Freight-paying Load per Train Mile.	Average Haul per ton.	Earnings per "Ton-Mile."	Density of Traffic per Average Mile Worked
			,000 omitted.	£	Tons.	Miles.	d.	
Trans-Australian ..	82,371	32,858	6,281	34,486	76	191	1.32	5,973
Oodnadatta ..	240,440	69,179	9,188	84,278	38	133	2.20	19,224
Federal Capital Territory ..	3,304	18,504	92	3,326	28	5	8.64	18,707
Northern Territory	12,430	3,167	351	6,141	28	111	4.20	1,766

12. *Passenger Fares, Goods Rates, and Parcel Rates.*—(i) *Passenger Fares.* In the following table the fares for certain specified distances on the Trans-Australian, Oodnadatta, and Northern Territory railways are set out :—

RAILWAYS, FEDERAL.—PASSENGER MILEAGE RATES, 1924.

Single Fare for a Journey of—	Trans-Australian Railway.						Oodnadatta Railway.						Northern Territory Railway.					
	First Class.			Second Class.			First Class.			Second Class.			First Class.			Second Class.		
	Average per Passenger-Mile.		Average per Passenger-Mile.		Average per Passenger-Mile.		Average per Passenger-Mile.		Average per Passenger-Mile.		Average per Passenger-Mile.		Average per Passenger-Mile.		Average per Passenger-Mile.		Average per Passenger-Mile.	
	Fare.		Fare.		Fare.		Fare.		Fare.		Fare.		Fare.		Fare.		Fare.	
Miles.	s. d.	d.	s. d.	d.	s. d.	d.	s. d.	d.	s. d.	d.	s. d.	d.	s. d.	d.	s. d.	d.	s. d.	d.
50	9	7	2.30	6	5	1.54	9	9	2.34	6	7	1.58	11	6	2.76	7	8	1.84
100	19	2	2.30	12	9	1.53	19	9	2.37	13	3	1.59	22	11	2.75	15	3	1.83
200	38	4	2.30	25	7	1.54	39	3	2.36	26	0	1.56	45	10	2.75	30	7	1.83
300	57	6	2.30	38	4	1.53	58	6	2.34	39	3	1.57	..	..	..	..	..	..
400	64	7	1.94	43	1	1.29	78	0	2.34	62	0	1.56	..	..	..	..	..	..
500	77	1	1.85	51	5	1.23	..	..	..	..	..	..	..	..	..	..	..	..
600	89	7	1.79	59	9	1.20	..	..	..	..	..	..	..	..	..	..	..	..
700	102	1	1.75	68	1	1.17	..	..	..	..	..	..	..	..	..	..	..	..
800	110	5	1.66	73	8	1.11	..	..	..	..	..	..	..	..	..	..	..	..
900	117	9	1.57	78	6	1.05	..	..	..	..	..	..	..	..	..	..	..	..
1,000	122	11	1.48	81	11	0.98	..	..	..	..	..	..	..	..	..	..	..	..
1,051	125	0	1.43	83	4	0.95	..	..	..	..	..	..	..	..	..	..	..	..

In the case of the Trans-Australian railway, through passengers have to pay for sleeping berths and meals in addition to the ordinary fares. For the first class sleeping-berths the charge is twelve shillings and sixpence for a night or part of a night, the corresponding charge for the second class being eight shillings. There is a fixed scale of charges made in respect of the meals served to other than through passengers between Port Augusta and Kalgoorlie. It will be observed that both the first and second class fares on the Trans-Australian railway have a constant rate for distances up to 300

miles and then have a tapering character beyond that distance, while those for the Oodnadatta and the Northern Territory railways are practically uniform for all distances.

(ii) *Agricultural Produce and Ordinary Goods Rates.* The rates for agricultural produce and ordinary goods on the Trans-Australian and Northern Territory railways are set out in the following tables :—

RAILWAYS, FEDERAL.—RATES FOR AGRICULTURAL PRODUCE, 1924.

For a haul of—	Northern Territory Railway.		Trans-Australian Railway.		For a haul of—	Trans-Australian Railway, contd.	
	Rate per Ton in Truck Loads.	Average per Ton-Mile.	Rate per Ton in Truck Loads.	Average per Ton-Mile.		Rate per Ton in Truck Loads.	Average per Ton-Mile.
	<i>s. d.</i>	<i>d.</i>	<i>s. d.</i>	<i>d.</i>		<i>s. d.</i>	<i>d.</i>
50 miles ..	8 5	2.02	6 3	1.50	600 miles ..	38 4	0.77
100 " ..	13 8	1.64	10 1	1.21	700 " ..	42 6	0.73
200 " ..	24 1	1.44	17 9	1.07	800 " ..	46 8	0.70
300 " ..	..	..	24 11	0.99	900 " ..	50 5	0.67
400 " ..	..	..	27 6	0.83	1,000 " ..	53 0	0.65
500 " ..	..	..	33 4	0.80	1,051 " ..	55 0	0.63

RAILWAYS, FEDERAL.—RATES FOR ORDINARY GOODS, 1924.

For a Haul of—	Northern Territory Railway.				Trans-Australian Railway.				For a Haul of—	Trans-Australian Railway, contd.									
	Class of Freight.				Class of Freight.					Class of Freight.									
	Highest.		Lowest.		Highest.		Lowest.			Highest.		Lowest.							
	Rate per Ton.	Average per Ton-Mile.	Rate per Ton.	Average per Ton-Mile.	Rate per Ton.	Average per Ton-Mile.	Rate per Ton.	Average per Ton-Mile.		Rate per Ton.	Average per Ton-Mile.	Rate per Ton.	Average per Ton-Mile.						
Miles.	s. d.	d.	s. d.	d.	s. d.	d.	s. d.	d.	Miles.	s. d.	d.	s. d.	d.						
50	49	3	11.82	8 5	2.02	36	2	8.68	6 3	1.50	600	223	9	4.48	38	4	0.77		
100	89	11	10.79	13	8	1.54	66	2	7.04	10	1	1.21	700	239	5	4.10	42	6	0.73
200	165	6	9.93	24	1	1.45	122	5	7.34	17	9	1.07	800	255	0	3.83	46	8	0.70
300	164	6	6.58	24	11	0.99	900	269	1	3.59	50	5	0.67	
400	172	2	5.17	27	6	0.83	1,000	281	7	3.38	53	9	0.65	
500	201	4	4.83	33	4	0.80	1,051	287	6	3.28	55	0	0.63	

As the figures show, the average rates per ton-mile are of a tapering character.

(iii) *Parcel Rates.* On the Trans-Australian railway, parcels weighing between 85 and 112 lbs. are taken by passenger train 500 miles for thirteen shillings and threepence.

13. *Rolling Stock, 1924.*—The following table shows the numbers of locomotives and rolling stock in use on the Federal railways, classified according to gauge :—

RAILWAYS, FEDERAL.—LOCOMOTIVES AND ROLLING STOCK, 1924.

Railway.	Gauge.		Total.	Gauge.		Total.	Gauge.		Total.
	4 ft. 8½ in.	3 ft. 6 in.		4 ft. 8½ in.	3 ft. 6 in.		4 ft. 8½ in.	3 ft. 6 in.	
	LOCOMOTIVES.			COACHING STOCK			STOCK OTHER THAN COACHING.		
Trans-Australian	68	1	69	49	..	49	735	31	766
Northern Territory	..	13	13	..	10	10	..	301	301
Total	68	14	82	49	10	59	735	332	1,067

The Oodnadatta and Federal Capital Territory Railways are worked by the South Australian and New South Wales Government Railways Departments respectively which use their own rolling stock.

(ii) *Particulars for Quinquennium 1920-24.* The following table shows the number of accidents in each of the years 1920 to 1924 :—

RAILWAYS, FEDERAL.—ACCIDENTS, 1920 TO 1924.

Railway.	Number of Persons—									
	Killed.					Injured.				
	1920.	1921.	1922.	1923.	1924.	1920.	1921.	1922.	1923.	1924.
Trans-Australian ..	3	..	..	1	1	6	3	8	14	9
Oodnadatta ..	..	..	..	..	..	12	6	8	7	7
Federal Capital Territory ..	..	..	..	..	..	..	..	..	..	..
Northern Territory ..	..	3	..	..	1	3	1	1	1	1
Total ..	3	3	..	1	2	21	10	17	22	17

§ 3. State Railways.

1. *Administration and Control of State Railways.*—The policy of Government control of the railways has been adopted in each State, and earlier issues of the Year Book (see No. 6, p. 693) contain a description of the methods adopted by the various State Governments in the control and management of their railways.

2. *Mileage Open, 1920 to 1924.*—The following table shows the length of State railways open for traffic on the 30th June in the years 1920 to 1924 :—

RAILWAYS, STATE.—MILEAGE OPEN FOR TRAFFIC, 1920 TO 1924.

Year ended 30th June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	All States.
	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.
1920	5,015	4,214	5,685	2,333	3,538	629	21,414
1921	5,043	4,267	5,752	2,333	3,538	630	21,563
1922	5,116	4,317	5,799	2,357	3,538	637	21,764
1923	5,318	4,333	5,906	2,373	3,555	663	22,148
1924	5,523	4,434	6,040	2,452	3,629	673	22,751

A graph indicating the mileage open in Australia at the end of each of the years 1870 to 1924 accompanies this chapter.

The following statement shows the actual mileage opened for traffic in the year 1924, and also the annual average increase in mileage opened since 1914 in each State :—

RAILWAYS, STATE.—MILEAGE OPENED ANNUALLY.

Mileage.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	All States.
Mileage opened during 1923-24	205.01	101.33	134.55	78.61	73.99	9.52	603.01
Average annual mileage increase for 10 years to 30th June, 1924 ..	155.6	60.0	147.0	60.7	66.2	15.4	504.9

(ii) *New South Wales.* During the year ended 30th June, 1924, the extensions from Coonabarabran to Gwabegar (59.84 miles); Tarana to Oberon (15.09 miles); Binnaway to Werris Creek (91.66 miles); Macksville to Urunga (17.25 miles); and Gilmore to Kunama (21.56 miles) were opened for traffic. Readjustments of actual mileage open reduced the mileage by 0.39 miles, making a total increase for the year of 205.01 miles.

(ii) *Victoria*. The following lines were opened for traffic during 1923-24:—Redcliffs to Millewa North (35.40 miles); Annuello to Robinvale (19.50 miles); and North Melbourne to Kensington (2.10 miles). In addition a line from Echuca (Victoria) to Deniliquin (New South Wales) (44.33 miles) was purchased from the Deniliquin-Moama Railway Company, making a total increase of 101.33 miles for the year.

(iii) *Queensland*. By the opening of the line from Farleigh to Proserpine (68.69 miles) through communication was established from Brisbane and southern stations to Lilypond, north of Townsville. Other lines opened during the year were:—Mundubbera to Ceratodus (31.17 miles); Rannes to Callide (27.72 miles); and El Arish to Feluga (5.55 miles). In addition readjustment of the mileages of certain other sections increased the existing mileage open by 1.42 miles, making a total increase of 134.55 miles for the year.

(iv) *South Australia*. The only new lines opened for traffic during the year were from Wandana to Penang (51.66 miles), and a section of 26.95 miles from Bowman's to Long Plains; a total of 78.61 miles.

(v) *Western Australia*. During the year two new extensions—Bencubbin to Kalkalling (31.69 miles) and Nyabing to Pingerup (21.50 miles) were taken over, and a private line from Lakeside to White Hope (20.80 miles) was purchased; the total increase for the year being 73.99 miles.

(vi) *Tasmania*. Extensions from Palooa to Barrington (4.80 miles, and from Preolenna to Maweenaa (4.72 miles)—a total of 9.52 miles, were taken over during the year.

3. *Length and Gauge of Railway Systems in each State*.—In all the States the Government railways are grouped, for the convenience of administration and management, into several divisions or systems. A summary showing concisely the gauge and length of the main and branch lines included in each division or system of the different States for the year ended 30th June, 1924 is given in the Transport and Communication Bulletin No. 16 issued by this Bureau.

4. *Average Mileage Worked and Train-Miles Run*.—The total mileage open for traffic at the end of each financial year has been given previously, but, in considering the returns relating to revenue and expenditure and other matters, it is desirable to know the average number of miles actually worked during each year. The next table shows the average number of miles worked and the total number of train-miles run by the Government railways of each State during the years 1920 to 1924 inclusive:—

RAILWAYS, STATE.—MILEAGE WORKED AND MILES RUN, 1920 TO 1924.

Year ended 30th June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	All States.
AVERAGE MILEAGE WORKED.							
1920 ..	4,986	4,194	5,635	2,316	3,538	635	21,284
1921 ..	5,019	4,237	5,733	2,333	3,538	637	21,497
1922 ..	5,077	4,270	5,784	2,344	3,538	635	21,657
1923 ..	5,197	4,314	5,883	2,359	3,552	663	21,953
1924 ..	5,460	4,369	5,960	2,416	3,593	668	22,466
TRAIN-MILES RUN.							
1920 ..	22,834,889	15,022,465	10,443,619	5,192,038	4,851,446	1,266,625	59,611,082
1921 ..	22,792,053	15,533,556	10,735,723	5,712,491	4,918,113	1,387,417	61,079,353
1922 ..	21,887,065	15,856,815	9,634,532	5,629,957	4,564,031	1,433,099	59,006,099
1923 ..	21,693,861	16,394,239	10,917,584	5,792,793	4,505,299	1,434,816	60,738,597
1924 ..	23,706,988	17,079,211	11,647,077	6,186,769	4,839,285	1,416,216	64,875,546

In some years the average mileage worked in Tasmania is greater than the mileage open owing to the Railway Department having running powers over certain private lines.

5. *Lines under Construction, and Lines Authorized, 1924*.—(i) *General*. The following statement gives particulars up to the 30th June, 1924, of the mileage of State railways (a) under construction, and (b) authorized for construction but not commenced:—

**RAILWAYS, STATE.—MILEAGE UNDER CONSTRUCTION AND AUTHORIZED,
30th JUNE, 1924.**

Particulars.	N.S.W.	Vic. (a)	Q'land.	S.A.	W.A.	Tas.	All States.
Mileage under construction ..	357.51	213.25	6441.00	44.05	6214.50	..	1,270.31
Mileage authorized but not commenced ..	209.84	162.25	1,166.00	91.60	206.50	..	1,836.19

(a) See sub-section (b) below.

(b) Exclusive of 130 miles on which work has been suspended.

(c) Exclusive of 33.50 miles on which work has been suspended.

(ii) *Lines under Construction.* In spite of the great extensions of State railways since the year 1875, there are still, in some of the States, immense areas of country which are as yet practically undeveloped, and in which little in the nature of permanent settlement has been accomplished. The general policy of the States is to extend the existing lines inland, in the form of light railways, as settlement increases, and while it is true that lines which were not likely to be commercially successful in the immediate future have been constructed from time to time for the purpose of encouraging settlement, the general principle that the railways should be self-supporting is kept in view.

(a) *New South Wales.* The total mileage under construction was 357.51 miles, consisting of the following lines:—Molong to Dubbo (80.15 miles); Glenreagh to Dorrigo (42.95 miles); Regent's Park to Cabramatta and Enfield (8.90 miles); Sydenham to Botany (5.20 miles); The Rock to Pulletop (26.12 miles); Roslyn to Taralga (15.83 miles); Richmond to Kurrajong (7.00 miles); Castle Hill to Rogan's Hill (0.96 miles); Trida to Menindie (159.31 miles); and the City and Suburban Railway (11.09 miles).

(b) *Victoria.* In this State 49.25 miles of 5 ft. 3 in. gauge lines are being constructed, viz.:—Hopetoun to Patchewollock (28 miles); Werrimul to The Hut (15.25 miles); and Merbein to Abbotsford (6 miles). The *Border Railways Act 1922* (Vic. 3194) provides for the construction of 164 miles in New South Wales territory, viz.:—Moama to Balranald (120 miles) and Gonn Crossing to Stony Crossing (44 miles). On completion these lines which are of 5 ft. 3 in. gauge will be taken over and operated by the Victorian Railways Commissioners.

(c) *Queensland.* In previous issues of the Year Book details were given of the scheme of railway construction under the provisions of the North Coast Railway Act 1910 (see Year Book No. 15, p. 551). On the 30th June, 1924, the following lines, of an aggregate length of 441 miles, were under construction:—Northern Division (North Coast Railway)—Feluga to Cardwell (31 miles); Lilypond to Cardwell (28 miles); Central Division—Many Peaks to Monto (45 miles); Callide to Monto (78 miles); Baralaba to Castle Creek (53 miles); and Longreach to Winton (110 miles); Southern Division—Ceratodus to Monto (34 miles); Winderam Branch (12 miles); and Tara towards Surat (50 miles). The following lines are partially constructed, but work thereon is temporarily suspended:—Wallaville to Kallawa (18 miles); Yaraka to Powell's Creek (27 miles); Dajarra to Moonah Creek (41 miles); Mt. Molloy Extension (7 miles); and Winton to 37-Mile (37 miles); a total of 130 miles.

(d) *South Australia.* A line from Long Plains to Redhill (44.05 miles) was under construction during the year ended 30th June, 1924.

(e) *Western Australia.* The following lines were in course of construction by the Public Works Department on the 30th June, 1924:—Esperance northward (66.50 miles); Busselton to Margaret River (41.50 miles); Margaret River to Flinders Bay (25.25 miles); Narembeen to Merredin (53.25 miles); Piawing northward (23 miles); and Bridgetown to Jarnadup (5 miles); a total of 214.50 miles. The construction of the line from Dwarda to Narrogin (33.50 miles) is at present in abeyance.

(f) *Tasmania.* At 30th June, 1924, no railway construction work was in progress.

(iii) *Lines Authorized for Construction.* (a) *New South Wales.* At the 30th June, 1924, the following lines had been authorized for construction but not commenced:—Gilgandra to Collie (21.51 miles); Grafton to South Grafton, with bridge over Clarence

River (2.34 miles); Ballina to Booyong (15.20 miles); Bankstown to Regent's Park (2.35 miles); Camurra to Boggabilla (70 miles); Ungarie to Naradhun (37 miles); Uranquinty towards Moon's Siding (28.44 miles); and Wyalong to Condobolin (33 miles); a total distance of 203.84 miles.

(b) *Victoria*. The following lines were authorized, but construction had not been commenced up to the end of June, 1924 :—5 ft. 3 in gauge : Goroke to Morea (9 miles); Kanagulk to Edenhope (37.75 miles); Kooloonong to West Narrung (7 miles); Mildura to Murray River (4 miles); Bowser to Peechelba (11 miles); and Marnoo to Wallaloo (6.50 miles.) Under the Border Railways Act 1922, the following lines have been approved for construction in New South Wales territory :—Yarrowonga (Victoria) to Oatlands (New South Wales) (37 miles); Euston (New South Wales) to Benanee and beyond (New South Wales) (30 miles); and Gol Gol Extension (20 miles); an aggregate distance of 162.25 miles.

(c) *Queensland*. In addition to the new lines upon which work has been commenced, Parliament has authorized the construction of the following parts of the Great Western Railway: Section A, from Quilpie to Eromanga (120 miles); Section B, from Powell's Creek (224 miles); Section C, from 37-Mile to Springvale (324 miles); and Section D, from Moonah Creek (217 miles). The following lines were also authorized for construction: Inglewood to Texas and Silverspur (44 miles); Mount Edwards to Maryvale (28 miles); Lanefield to Rosevale (17 miles); Gatton to Mount Sylvia (11 miles); Juandah to Taroom (42 miles); Dirranbandi extension (52 miles); Yarraman to Nanango (16 miles); Brooloo to Kenilworth (10 miles); Dobbyn to Myally Creek (50 miles); Pearamon towards Boonjee (11 miles); a total of 1,166 miles.

(d) *South Australia*. Parliament has authorized the construction of lines on the 5-ft. 3-in. gauge from Paringa to Renmark, a distance of 2.50 miles; Wanbi to Morook (31 miles); and Bumbunga to Lochiel (5 miles); on the 3-ft. 6-in. gauge from Kielpa to Mangalo Hall (26.25 miles); Kimba to Buckleboo (21.85 miles); and from Kowulka to Sec. 2, Hundred of Kevin (5 miles). The conversion of certain 3-ft. 6-in. gauge lines in the north-west of the State to 5-ft. 3-in. gauge has also been authorized. About 175 miles of line are involved in this scheme.

(e) *Western Australia*. The following lines were authorized for construction up to the 30th June, 1924 :—Bridgetown-Jarnadup (Part) (23 miles); Albury to Denmark (35 miles); Yarramong eastwards (85 miles); Lake Grace to Newdegate (37 miles); and Brookton to Dale River (26.50 miles); a distance of 206.50 miles.

(f) *Tasmania*. There were no new railways authorized on which work had not been commenced at 30th June, 1924.

6. **Cost of Construction and Equipment.**—(i) *General*. The total cost of construction and equipment of the State railways at the 30th June, 1924, amounted to £251,793,227, or to an average cost of £11,067 per mile open for traffic. Particulars of the capital expenditure incurred on lines open for traffic are given in the following table :—

RAILWAYS, STATE.—MILEAGE AND COST TO 30th JUNE, 1924.

State.	Length of Line Open (Route).	Total Cost of Construction and Equipment.	Average Cost per Mile Open.	Cost per Head of Population.	Mileage per 1,000 of Population.
	Miles.	£	£	£	Miles.
New South Wales (a) ..	5,522.80	91,792,167	16,621	41.22	2.48
Victoria	4,434.68	(b) 65,880,792	(b) 14,856	40.18	2.70
Queensland	6,039.96	47,367,439	7,842	57.24	7.30
South Australia (a) ..	2,451.70	(c) 21,410,602	(c) 8,733	40.48	4.66
Western Australia (a)	3,628.83	18,967,443	5,227	52.64	10.07
Tasmania	672.90	6,374,784	9,474	29.90	3.16
All States	22,750.87	251,793,227	11,067	43.39	3.92

(a) Exclusive of Federal railways.

(b) Exclusive of cost of line from Murrayville to South Australian border (12.53 miles).

(c) Exclusive of cost of line from Mount Gambier to Victorian border (11.67 miles).

The lowest average cost (£5,227) per mile open is in Western Australia, and the highest (£16,621) in New South Wales, as compared with an average of £11,067 for all States. There were few costly engineering difficulties in Western Australia, and the fact that contractors were permitted to carry traffic during the term of their contracts considerably reduced expenditure, particularly in respect of all goldfield contracts.

In the above table the figures relating to cost of construction and equipment do not include the discounts and flotation charges on loans allocated to the railways. This will explain the reason for the differences between the amounts shown above for Queensland, South Australia, and Western Australia and those shown in the Railway Reports for these States.

(ii) *Capital Cost, All Lines.* (a) *Total.* The increase in the total capital cost of construction and equipment of Government railways for each year from 1920 to 1924 is shown in the following table :—

RAILWAYS, STATE.—CAPITAL COST OF LINES OPEN, 1920 TO 1924.

Year ended 30th June—	N.S.W.	Victoria. (a)	Q'land.	S. Aust. (b)	W. Aust.	Tasmania.	All States.
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TOTAL COST OF LINES OPEN.

	£	£	£	£	£	£	£
1920 ..	79,318,917	58,287,897	40,005,868	19,105,510	18,062,354	5,240,276	(a, b)220,020,822
1921 ..	80,756,194	59,798,696	41,368,040	19,270,704	18,169,980	5,383,192	(a, b)224,747,406
1922 ..	83,789,871	62,941,364	42,519,012	19,742,821	18,330,557	5,753,381	(a, b)235,077,006
1923 ..	87,713,871	64,615,435	44,823,991	20,234,003	18,555,115	6,199,725	(a, b)242,142,140
1924 ..	91,792,167	63,880,792	47,367,439	21,410,602	18,967,443	6,374,784	(a, b)251,793,227

COST PER MILE OPEN.

	£	£	£	£	£	£	£
1920 ..	15,815	13,832	7,037	8,188	5,105	8,344	(a, b)10,275
1921 ..	16,014	14,016	7,192	8,259	5,135	8,547	(a, b)10,495
1922 ..	16,378	14,560	7,332	8,376	5,181	9,035	(a, b)10,707
1923 ..	16,494	14,883	7,590	8,527	5,219	9,346	(a, b)10,933
1924 ..	16,621	14,856	7,842	8,733	5,227	9,474	(a, b)11,067

(a) Exclusive of cost of line from Murrayville to South Australian border (12.53 miles).

(b) Exclusive of cost of line from Mount Gambier to Victorian border (11.67 miles).

(b) *From Consolidated Revenue.* The following table shows the amounts provided from Consolidated Revenue for construction and equipment to 30th June, 1924 :—

RAILWAYS, STATE.—EXPENDITURE FROM CONSOLIDATED REVENUE FOR CONSTRUCTION AND EQUIPMENT TO 30th JUNE, 1924.

To 30th June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	All States.
	£	£	£	£	£	£	£
1924 ..	659,930	3,999,733	..	621,421	827,333	16,935	6,125,352

(iii) *Loan Expenditure.* The subjoined table shows the total loan expenditure on Government railways (including lines both open and unopen) in each State, except Tasmania, and on Government railways and tramways in the latter State for the years 1920 to 1924 :—

RAILWAYS, STATE.—LOAN EXPENDITURE, 1920 TO 1924.

Year ended 30th June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas. (a)	All States.
	£	£	£	£	£	£	£
1920 ..	2,387,303	982,182	2,356,498	236,925	93,676	91,221	6,147,805
1921 ..	3,598,351	1,685,329	1,760,932	252,097	145,724	254,079	7,696,512
1922 ..	4,399,725	3,478,021	1,226,280	572,482	323,296	490,990	10,490,794
1923 ..	4,177,273	1,674,643	2,134,162	659,120	519,557	254,120	9,418,875
1924 ..	2,914,722	1,395,282	2,318,205	779,441	561,988	250,514	8,220,152

(a) Including tramways.

The following statement shows the total loan expenditure on railways to the 30th June, 1924 :—

RAILWAYS, STATE.—TOTAL LOAN EXPENDITURE TO 30th JUNE, 1924.

State ..	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania. a	All States.
	£	£	£	£	£	£	£
Expenditure	98,976,730	64,766,368	40,828,206	23,424,655	18,991,563	6,840,689	262,834,211

(a) Including tramways.

7. Gross Revenue.—(i) *General.* The total revenue from all sources, the revenue per average mile worked, and the revenue per train-mile run during each financial year from 1920 to 1924 inclusive were as follows:—

RAILWAYS, STATE.—GROSS REVENUE, 1920 TO 1924.

Year ended 30th June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	All States.
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TOTAL GROSS REVENUE.

	£	£	£	£	£	£	£
1920 ..	13,083,847	8,221,972	4,960,150	2,726,540	2,291,876	506,177	31,793,562
1921 ..	14,267,205	9,795,763	5,279,412	2,942,028	2,720,032	600,045	35,604,485
1922 ..	15,213,019	10,791,082	5,154,530	3,297,347	2,827,856	588,297	37,872,131
1923 ..	15,221,333	11,347,057	5,420,400	3,710,922	2,915,985	572,417	39,188,114
1924 ..	15,616,577	11,958,635	5,714,036	3,929,428	3,227,371	585,468	41,031,515

GROSS REVENUE PER AVERAGE MILE WORKED.

	£	£	£	£	£	£	£
1920 ..	2,635	1,961	880	1,177	648	797	1,494
1921 ..	2,843	2,312	921	1,261	768	942	1,656
1922 ..	2,996	2,522	891	1,406	799	927	1,749
1923 ..	2,929	2,630	924	1,573	821	863	1,785
1924 ..	2,860	2,737	959	1,627	898	877	1,826

GROSS REVENUE PER TRAIN-MILE RUN.

	d.	d.	d.	d.	d.	d.	d.
1920 ..	137.51	131.40	113.99	126.03	113.38	95.91	127.80
1921 ..	150.23	151.35	118.02	123.60	132.74	103.79	139.90
1922 ..	166.82	163.33	128.40	140.56	148.68	98.51	150.04
1923 ..	168.39	166.11	119.15	153.74	155.34	95.74	154.85
1924 ..	153.09	163.05	117.74	152.42	160.06	99.22	151.79

The amounts of revenue earned per average mile worked and per train-mile run in respect of (a) coaching and (b) goods and live stock traffic, separately, are given elsewhere.

(ii) *Coaching, Goods, and Miscellaneous Receipts. (a) Totals.* The gross revenue is composed of (a) receipts from coaching traffic, including the carriage of mails, horses, parcels, etc., by passenger trains; (b) receipts from the carriage of goods and live stock; and (c) rents and miscellaneous items. The subjoined table shows the gross revenue for 1920 to 1924, classified according to the three chief sources of receipts. The total of the three items specified has already been given in the preceding paragraph.

RAILWAYS, STATE.—COACHING, GOODS, ETC., RECEIPTS, 1920 TO 1924.

Year ended 30th June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	All States.
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COACHING TRAFFIC RECEIPTS.

	£	£	£	£	£	£	£
1920 ..	5,714,131	4,205,420	1,833,349	1,130,659	764,872	236,763	13,885,194
1921 ..	6,384,031	4,897,258	1,885,677	1,185,878	911,007	270,635	15,534,486
1922 ..	6,636,530	5,376,620	1,898,050	1,240,354	973,153	263,340	16,388,047
1923 ..	6,694,353	5,664,738	2,008,282	1,270,590	972,318	262,373	16,872,654
1924 ..	6,797,888	5,914,559	2,092,693	1,286,298	996,776	253,386	17,341,600

GOODS AND LIVE STOCK TRAFFIC RECEIPTS.

1920 ..	6,807,792	3,721,122	3,000,829	1,556,224	1,394,908	261,657	16,742,532
1921 ..	7,270,856	4,411,276	3,267,289	1,719,556	1,637,979	320,798	18,627,754
1922 ..	7,953,909	4,815,056	3,105,485	2,000,716	1,688,482	312,890	19,876,538
1923 ..	7,868,769	4,953,192	3,290,471	2,378,034	1,768,211	294,831	20,553,508
1924 ..	8,096,274	5,204,526	3,487,987	2,558,706	2,050,707	318,668	21,716,868

MISCELLANEOUS RECEIPTS.

1920 ..	561,924	298,430	125,972	39,657	132,096	7,757	1,165,836
1921 ..	612,318	487,229	126,446	36,594	171,046	8,612	1,442,245
1922 ..	622,580	599,406	150,995	56,277	166,221	12,067	1,607,546
1923 ..	658,211	729,127	121,647	62,298	175,456	15,213	1,761,952
1924 ..	722,415	839,550	133,356	84,424	179,888	13,414	1,973,047

(b) *Percentages.* The following table shows for the two years 1922-23 and 1923-24 the percentage which each class of receipts bears to the total gross revenue:—

RAILWAYS, STATE.—PERCENTAGES OF RECEIPTS, 1923 AND 1924.

State.	1923.			1924.		
	Coaching.	Goods and Live Stock.	Miscellaneous.	Coaching.	Goods and Live Stock.	Miscellaneous.
	%	%	%	%	%	%
New South Wales ..	43.98	51.69	4.33	43.53	51.84	4.63
Victoria ..	49.92	43.65	6.43	49.46	43.52	7.02
Queensland ..	37.05	60.71	2.24	36.62	61.04	2.34
South Australia ..	34.24	64.08	1.68	32.73	65.12	2.15
Western Australia ..	33.35	60.64	6.01	30.89	63.54	5.57
Tasmania ..	45.83	51.51	2.66	43.28	54.43	2.29
All States ..	43.05	52.45	4.50	42.23	52.93	4.81

(c) *Averages for Coaching Traffic Receipts.* The subjoined table shows the receipts from coaching traffic per average mile of line worked, and per passenger-train-mile, in each State for the year ended the 30th June, 1924 :—

RAILWAYS, STATE.—COACHING TRAFFIC RECEIPTS, AVERAGES, 1924.

State.	Number of Passenger-Train-Miles.	Coaching Traffic Receipts.		
		Gross.	Per Average Mile Worked.	Per Passenger-Train-Mile.
	No.	£	£	d.
New South Wales	12,384,696	6,797,888	1,245	131.73
Victoria	11,139,983	5,914,559	1,354	127.42
Queensland	4,200,018	2,092,693	351	119.58
South Australia	2,917,638	1,286,298	532	105.81
Western Australia	1,923,358	996,776	277	124.38
Tasmania	671,816	253,386	379	90.52
All States	33,237,509	17,341,600	772	125.22

(d) *Averages for Goods and Live Stock Traffic.* The gross receipts from goods and live stock traffic per average mile worked, per goods-train-mile, and per ton carried, for the year ended the 30th June, 1924, are given below :—

RAILWAYS, STATE.—GOODS AND LIVE-STOCK TRAFFIC RECEIPTS, AVERAGES, 1924.

State.	Number of Goods-Train-Miles.	Goods and Live-Stock Tonnage.	Goods and Live-Stock Traffic Receipts.			
			Gross.	Per Average Mile Worked.	Per Goods-Train-Mile.	Per Ton Carried.
	No.	Tons.	£	£	d.	d.
New South Wales	11,322,292	15,693,127	8,096,274	1,483	171.62	123.82
Victoria	5,939,228	8,309,543	5,204,526	1,191	210.31	150.32
Queensland	7,447,059	4,273,926	3,487,987	585	112.41	195.87
South Australia	3,269,131	3,565,307	2,558,706	1,059	187.84	172.24
Western Australia	2,915,927	3,023,299	2,050,707	571	168.79	162.79
Tasmania	744,400	706,961	318,668	477	102.74	108.18
All States	31,638,037	35,572,163	21,716,868	967	164.74	146.52

8. *Working Expenses.*—(i) *General.* In order to make an adequate comparison of the working expenses, allowance should be made for the variation of gauges and of physical and traffic conditions, not only on the railways of the different States, but also on different portions of the same system. Where traffic is light, the percentage of working expenses is naturally greater than where traffic is heavy ; and this is especially true in Australia, where ton-mile rates are in many cases based on a tapering principle—i.e., a lower rate per ton-mile is charged upon merchandise from remote interior districts—and where on many of the lines there is but little back loading.

The following table shows the total annual expenditure and the percentage of the total of these expenses upon the corresponding gross revenues in each State for each year from 1920 to 1924 :—

RAILWAYS, STATE.—WORKING EXPENSES, 1920 TO 1924.

Year ended 30th June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	All States.
TOTAL WORKING EXPENSES.							
1920	£ 9,570,983	£ 6,058,912	£ 4,323,392	£ 2,007,361	£ 2,000,473	£ 390,191	£ 24,351,312
1921	11,032,677	7,835,756	5,048,498	2,655,465	2,422,004	476,187	29,470,587
1922	11,116,302	8,026,665	4,810,362	2,537,110	2,328,843	538,066	29,357,348
1923	10,649,974	8,181,926	4,714,262	2,781,547	2,210,348	514,350	28,052,407
1924	10,917,491	8,718,394	4,990,749	2,901,298	2,297,980	550,185	30,376,097

PERCENTAGE OF WORKING EXPENSES ON GROSS REVENUE.

1920	% 73.15	% 73.66	% 87.16	% 73.62	% 87.29	% 77.08	% 76.59
1921	77.33	79.99	95.63	90.26	89.04	79.35	82.77
1922	73.07	74.38	93.32	76.94	82.35	91.46	77.52
1923	69.97	72.11	86.97	74.96	75.80	89.86	74.14
1924	69.91	72.90	87.34	73.84	71.20	93.97	74.03

The variation in the percentage of working expenses on the gross revenue in each State for the years 1865 to 1924, is illustrated in the graph which accompanies this chapter.

(ii) *Averages.* The following table shows the working expenses per average mile worked and per train-mile run in each State for the years 1920 to 1924 :—

RAILWAYS, STATE.—WORKING EXPENSES, AVERAGES, 1920 TO 1924.

Year ended 30th June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	All States.
WORKING EXPENSES PER AVERAGE MILE WORKED.							
1920	£ 1,927	£ 1,445	£ 767	£ 867	£ 565	£ 614	£ 1,144
1921	2,198	1,849	881	1,138	684	748	1,371
1922	2,189	1,876	832	1,082	658	848	1,356
1923	2,049	1,896	803	1,179	622	775	1,323
1924	1,999	1,995	837	1,201	640	824	1,352

WORKING EXPENSES PER TRAIN-MILE RUN.

1920	d. 100.59	d. 96.80	d. 99.35	d. 92.79	d. 98.96	d. 73.93	d. 98.04
1921	116.17	118.21	112.86	111.56	118.19	82.37	115.10
1922	121.89	121.49	119.83	108.15	122.45	90.11	119.41
1923	117.82	119.78	103.63	115.24	117.75	86.03	114.79
1924	110.52	122.52	102.84	112.54	113.98	93.24	112.37

The working expenses per average mile worked for all States for the year 1924 increased by £208 over the year 1920, but at the same time it must be taken into consideration that the gross revenue shows a still greater increase, viz., £332. The working expenses per train-mile run increased during the same period by 14.33d., while the gross revenue rose by 23.99d.

(iii) *Distribution.* The subjoined table shows the distribution of working expenses, under four chief heads of expenditure, for the years 1920 to 1924 :—

RAILWAYS, STATE.—DISTRIBUTION OF WORKING EXPENSES, 1920 TO 1924.

Year ended 30th June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	All States.
MAINTENANCE.							
	£	£	£	£	£	£	£
1920	1,589,472	1,288,030	988,881	350,953	485,647	100,276	4,803,259
1921	1,808,531	1,576,857	1,153,095	526,120	561,845	122,349	5,748,797
1922	1,940,794	1,708,539	1,162,367	400,541	557,091	152,168	5,921,500
1923	1,891,233	1,761,951	1,103,893	414,395	513,790	144,973	5,830,235
1924	1,865,096	1,861,887	1,197,992	545,987	543,387	151,186	6,165,535
LOCOMOTIVE, CARRIAGE, AND WAGON CHARGES.							
1920	4,603,775	2,785,614	2,000,901	1,101,629	927,139	185,576	11,604,634
1921	5,466,880	3,541,967	2,374,560	1,414,866	1,095,300	229,154	14,122,727
1922	5,474,485	3,426,370	2,165,438	1,417,305	1,074,460	239,153	13,797,216
1923	5,247,980	3,482,711	2,120,267	1,579,432	1,042,751	228,308	13,701,449
1924	5,360,663	3,219,267	2,214,001	1,548,799	1,092,580	234,562	13,669,872
TRAFFIC EXPENSES.							
1920	2,535,813	1,820,588	1,251,192	495,700	529,802	87,786	6,720,881
1921	3,027,041	2,246,443	1,428,008	651,579	688,077	109,521	8,150,669
1922	2,993,601	2,395,694	1,387,425	660,202	621,058	125,038	8,183,018
1923	2,806,970	2,399,867	1,400,869	722,641	592,445	117,607	8,040,399
1924	2,939,236	3,081,776	1,487,334	738,845	599,678	122,395	8,969,264
OTHER CHARGES.							
1920	841,923	164,680	82,418	59,079	57,885	16,553	1,222,538
1921	730,225	470,489	92,835	62,900	76,782	15,163	1,448,394
1922	707,422	496,062	95,132	59,062	76,234	21,702	1,455,614
1923	703,791	537,397	89,233	65,079	61,362	23,462	1,480,324
1924	752,496	555,464	91,422	67,667	62,335	42,042	1,571,426

In New South Wales and Victoria the expenditure in connexion with refreshment rooms is included in "Other Charges."

9. Net Revenue.—(i) *Net Revenue and Percentage on Capital Cost.* The following table shows the net sums available to meet interest charges, also the percentage of such sums upon the capital cost of construction and equipment of lines opened for traffic in each State for the years 1920 to 1924 :—

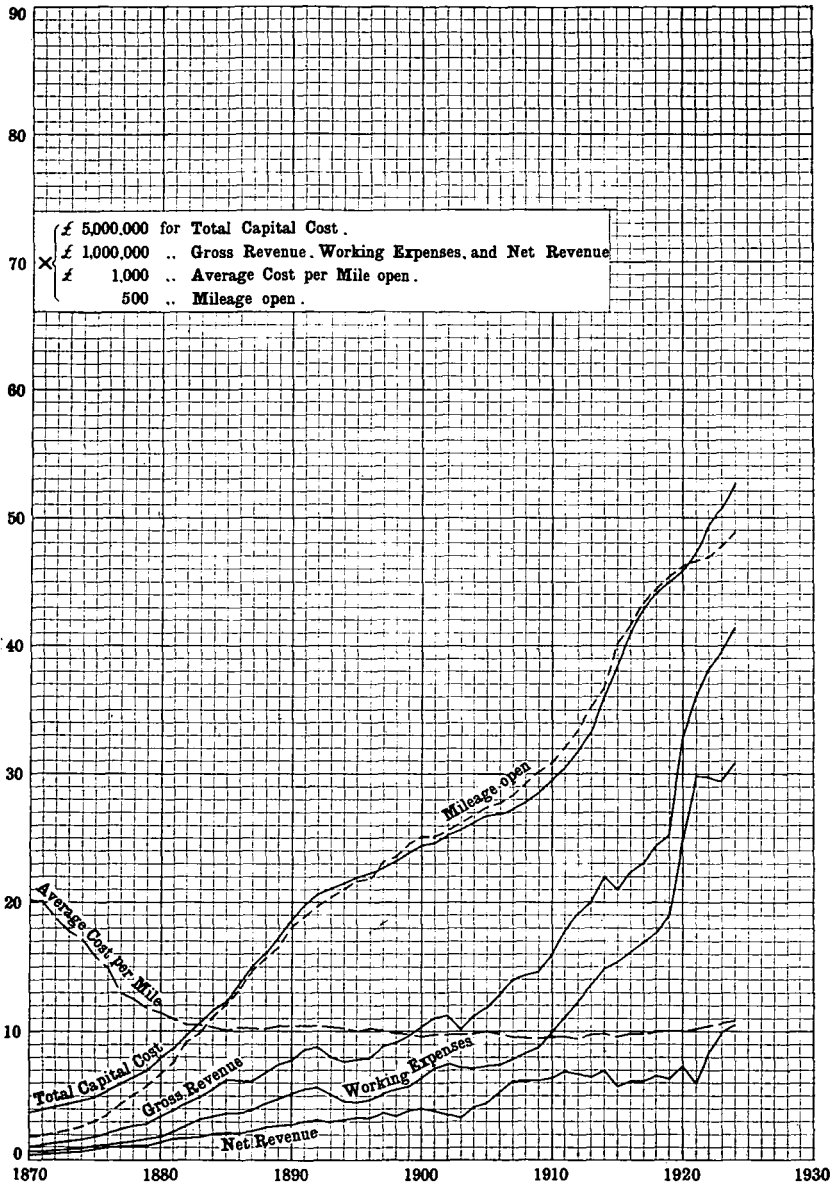
RAILWAYS, STATE.—NET REVENUE AND PERCENTAGE OF NET REVENUE ON CAPITAL COST OF LINES OPEN, 1920 TO 1924.

Year ended 30th June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	All States.
NET REVENUE.							
	£	£	£	£	£	£	£
1920	3,512,863	2,166,060	636,758	719,180	291,403	115,986	7,442,250
1921	3,234,528	1,960,007	230,914	286,563	298,028	123,858	6,133,898
1922	4,096,717	2,764,417	344,168	760,237	499,013	50,231	8,514,783
1923	4,571,359	3,165,131	706,138	929,375	705,637	58,067	10,135,707
1924	4,699,086	3,240,241	723,287	1,028,130	929,391	35,283	10,655,418
PERCENTAGE OF NET REVENUE ON CAPITAL EXPENDITURE.							
	%	%	%	%	%	%	%
1920	4.43	3.72	1.59	3.76	1.61	2.21	3.38
1921	3.93	3.27	0.56	1.48	1.64	2.30	2.72
1922	4.89	4.39	0.81	3.85	2.72	0.87	3.65
1923	5.21	4.90	1.58	4.59	3.80	0.94	4.19
1924	5.12	4.92	1.53	4.80	4.90	0.55	4.23

These figures are also represented in the graphs which accompany this chapter.

The percentage of net revenue on capital expenditure for all States during the past five years reached its maximum during the year 1923-24, with a return of 4.23. This was, however, insufficient to meet interest payable, for which particulars are included in the following sub-section.

FINANCIAL POSITION OF THE GOVERNMENT RAILWAYS OF AUSTRALIA, 1870 TO 1924.



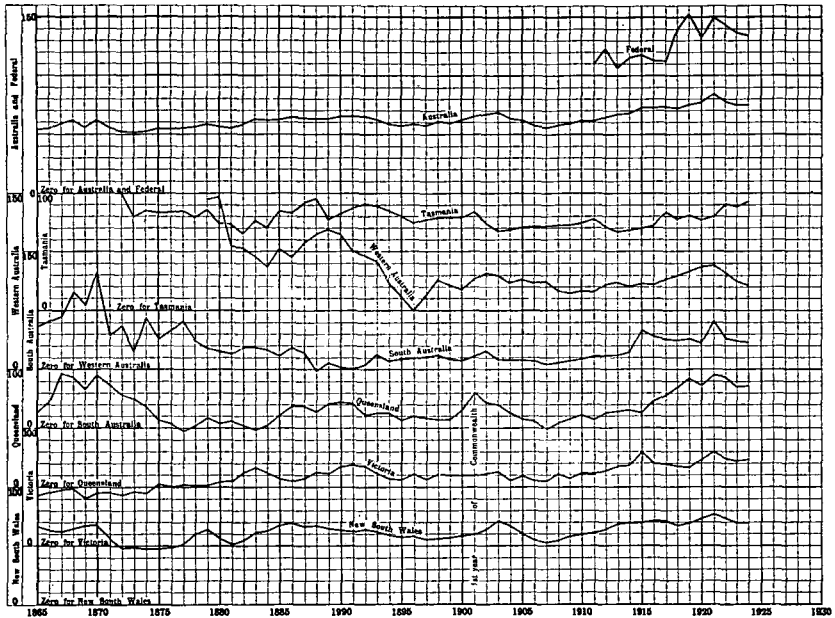
(See page 309.)

EXPLANATION.—The base of each small square represents throughout one year. The significance of the vertical height of each square varies according to the nature of the several curves.

In the curve for the total capital cost, the vertical side of each square represents £5,000,000.

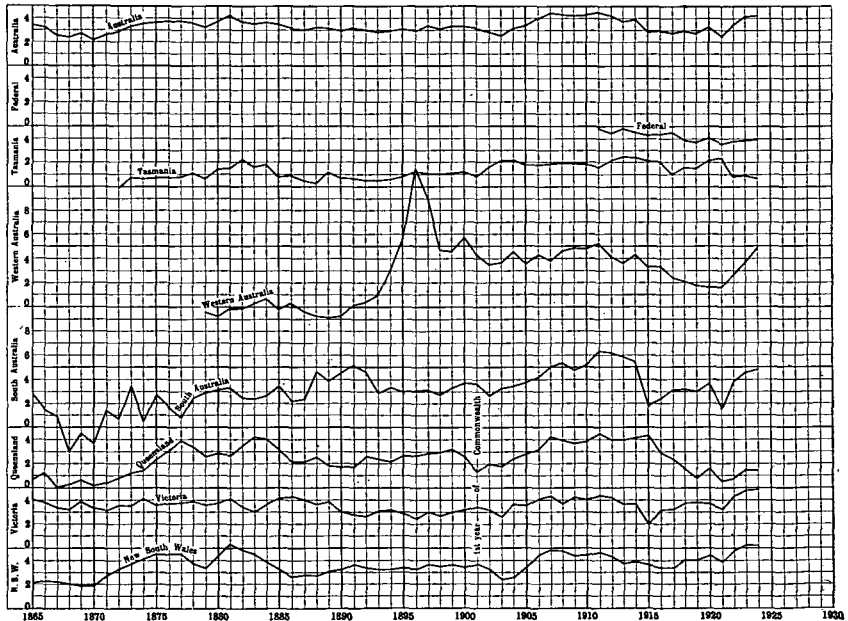
In the curves for (i) gross revenue, (ii) working expenses, and (iii) net revenue, the vertical height of each small square represents £1,000,000. For the curve of average cost per mile open, the vertical side of each small square represents £1,000. The mileage open is shown by a dotted curve, the vertical side of each small square representing 500 miles.

PERCENTAGES OF WORKING EXPENSES ON GROSS REVENUE OF GOVERNMENT
RAILWAYS, 1865 TO 1924.



EXPLANATION.—The base of each small square represents throughout one year. The vertical side of a small square denotes throughout 10 per cent., the heavy zero lines being different for each State and Australia, with, however, two exceptions, the zero lines for South Australia and Western Australia being identical, as is also the case with the zero line for Australia and Federal.

PERCENTAGES OF NET REVENUE ON CAPITAL COST OF GOVERNMENT
RAILWAYS, 1865 TO 1924.



EXPLANATION.—The base of each small square represents throughout one year. The vertical side of a small square denotes 1 per cent., the thick zero lines, however, for each State and Australia being different, but the zero line for Federal is the same as that for Australia.

Where the curve for any State falls below that State's zero line, loss is indicated, the working expenses having exceeded the gross revenue.

(ii) *Net Revenue Averages.* Tables showing the gross earnings and the working expenses per average mile worked and per train-mile run have been given previously. The net earnings, i.e., the excess of gross earnings over working expenses per average mile worked and per train-mile run are shown in the following table:—

RAILWAYS, STATE.—NET REVENUE AVERAGES, 1920 TO 1924.

Year ended 30th June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	All States.
NET REVENUE PER AVERAGE MILE WORKED.							
	£	£	£	£	£	£	£
1920	708	516	113	311	82	183	350
1921	645	463	40	123	84	194	286
1922	807	646	59	324	141	79	393
1923	880	734	121	394	199	88	462
1924	861	742	122	426	258	53	474
NET REVENUE PER TRAIN-MILE RUN.							
	d.	d.	d.	d.	d.	d.	d.
1920	36.92	34.61	14.63	33.24	14.42	21.97	29.96
1921	34.06	29.56	5.16	12.04	14.55	21.42	23.95
1922	44.93	41.84	8.57	32.41	26.23	8.41	30.63
1923	50.57	46.33	15.52	38.50	37.59	9.71	40.05
1924	47.57	45.53	14.90	39.88	46.08	5.98	39.42

10. *Profit or Loss.*—The following table shows the amount of interest payable on expenditure from loans on the construction and equipment of the railways, the actual profit or loss after deducting working expenses and interest and all other charges from the gross revenue, and the percentage of such profit or loss on the total capital cost of construction and equipment:—

RAILWAYS, STATE.—PROFIT OR LOSS, 1920 TO 1924.

Year ended 30th June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	All States.
AMOUNT OF INTEREST ON RAILWAY LOAN EXPENDITURE.							
	£	£	£	£	£	£	£
1920	3,641,988	2,225,881	1,723,760	789,362	690,618	197,587	9,269,196
1921	3,811,560	2,401,132	1,811,974	847,867	716,398	205,765	9,794,696
1922	4,217,881	2,580,001	1,924,375	905,319	756,737	228,488	10,612,801
1923	4,487,393	2,937,709	1,998,694	923,606	768,244	255,007	11,370,563
1924	4,693,417	3,001,370	2,136,187	977,376	787,221	263,157	11,858,728
PROFIT OR LOSS AFTER PAYMENT OF WORKING EXPENSES, INTEREST, AND OTHER CHARGES.							
	£	£	£	£	£	£	£
1920	- 129,125	- 59,821	- 1,037,001	- 70,182	- 399,215	- 81,601	- 1,828,945
1921	- 577,032	- 441,125	- 1,581,080	- 501,304	- 418,370	- 81,807	- 3,660,738
1922	- 121,104	+ 184,416	- 1,580,207	- 145,082	- 257,724	- 178,257	- 2,098,018
1923	+ 84,056	+ 227,422	- 1,292,556	+ 5,769	- 62,607	- 196,940	- 1,234,856
1924	+ 5,669	+ 238,871	- 1,412,900	+ 50,754	+ 142,170	- 227,874	- 1,203,310
PERCENTAGE OF PROFIT OR LOSS ON CAPITAL COST OF CONSTRUCTION AND EQUIPMENT.							
	%	%	%	%	%	%	%
1920	-0.16	-0.10	-2.71	-0.36	-2.21	-1.55	-0.83
1921	-0.70	-0.74	-3.82	-2.61	-2.30	-1.62	-1.62
1922	-0.15	+0.29	-3.72	-0.74	-1.41	-3.10	-0.90
1923	+0.10	+0.35	-2.88	+0.03	-0.34	-3.18	-0.61
1924	+0.01	+0.36	-2.98	+0.24	+0.75	-3.57	-0.48

— Indicates a loss.

It will be observed that the interest charges in 1924 were £2,589,532 higher than they were in 1920, in which year the interest payable on the total cost of construction and equipment was at the rate of 4.17 per cent. as against 4.71 per cent. in 1924.

11. **Traffic.**—(i) *General.* Reference has already been made to the difference in the traffic conditions on many of the lines. These conditions differ not only in the several States, but also on different lines in the same States, and apply to both passenger and goods traffic. By far the greater part of the population of Australia is confined to a fringe of country near the coast, more especially in the eastern and southern districts. A large proportion of the railway traffic between the chief centres of population is therefore carried over lines in the neighbourhood of the coast, and is thus, in some cases, open to sea-borne competition. On most of the lines extending into the interior traffic is light, as the density of population diminishes rapidly as the coastal regions are left behind and there is a corresponding diminution in the volume of traffic, while, in comparison with other more settled countries, there is but little back-loading.

The following table gives particulars for the years 1920 to 1924 :—

RAILWAYS, STATE.—TRAFFIC, 1920 TO 1924.

Year ended 30th June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	All States.
NUMBER OF PASSENGER JOURNEYS.							
1920 ..	114,654,660	134,012,162	28,177,817	22,852,116	18,411,231	2,267,856	320,375,842
1921 ..	120,735,140	134,045,683	27,735,170	23,787,884	17,732,571	2,637,837	326,724,294
1922 ..	121,298,861	142,456,924	27,155,606	23,316,141	17,895,509	2,757,702	334,880,743
1923 ..	123,714,639	155,957,240	28,358,170	24,475,170	17,830,292	2,884,210	353,219,721
1924 ..	128,101,184	167,861,864	29,535,981	25,177,933	18,133,168	2,959,887	371,770,017
PER 100 OF MEAN POPULATION.							
1920 ..	5,651	8,907	3,837	4,835	5,512	1,042	6,054
1921 ..	5,732	8,720	3,627	4,782	5,322	1,260	5,992
1922 ..	5,645	9,067	3,469	4,606	5,272	1,283	6,020
1923 ..	5,648	9,700	3,533	4,730	5,120	1,339	6,216
1924 ..	5,749	10,224	3,579	4,753	5,044	1,379	6,411
PER AVERAGE MILE OF LINE WORKED.							
1920 ..	23,087	31,953	5,003	9,867	5,203	3,570	15,052
1921 ..	24,058	31,639	4,838	10,195	5,012	4,220	15,199
1922 ..	23,892	33,290	4,695	9,945	5,059	4,345	15,462
1923 ..	23,805	36,151	4,833	10,375	5,020	4,350	16,090
1924 ..	23,461	38,417	4,957	10,422	5,047	4,433	16,548
TONNAGE OF GOODS AND LIVE STOCK CARRIED.							
1920 ..	13,293,528	7,770,694	3,790,881	2,578,908	2,613,606	575,169	30,622,786
1921 ..	15,563,131	7,572,993	3,867,650	2,682,218	2,604,068	672,127	32,962,187
1922 ..	14,197,055	7,491,031	3,732,413	2,827,681	2,548,258	621,751	31,418,189
1923 ..	13,801,310	7,517,216	4,208,989	3,283,594	2,624,320	563,346	32,003,775
1924 ..	15,693,127	8,309,543	4,273,926	3,565,307	3,023,293	706,961	35,572,163
PER 100 OF MEAN POPULATION.							
1920 ..	655	516	516	546	782	264	579
1921 ..	739	493	506	539	782	315	605
1922 ..	661	477	477	559	751	289	565
1923 ..	630	467	524	635	754	264	563
1924 ..	704	506	518	671	841	329	612
PER AVERAGE MILE OF LINE WORKED.							
1920 ..	2,676	1,852	672	1,113	738	905	1,438
1921 ..	3,101	1,787	675	1,150	736	1,055	1,533
1922 ..	2,796	1,751	645	1,206	720	980	1,451
1923 ..	2,656	1,743	717	1,391	739	857	1,458
1924 ..	2,874	1,902	717	1,476	842	1,059	1,583

(ii) *Metropolitan and Country Passenger Traffic and Revenue.* A further indication of the difference in passenger traffic conditions is obtained from a comparison of the volume of metropolitan and suburban, and country traffic in each State. Particulars were available for the first time in 1923 for all States.

**RAILWAYS, STATE.—METROPOLITAN AND SUBURBAN, AND COUNTRY
PASSENGER TRAFFIC AND RECEIPTS, 1923-24.**

Particulars.	Passenger Journeys.			Revenue.		
	Metropolitan and Suburban.	Country.	Total.	Metropolitan and Suburban.	Country.	Total.
	No.	No.	No.	£	£	£
N.S.W. ..	a 117,356,316	10,744,868	128,101,184	2,302,077	3,774,911	6,076,988
Victoria ..	b 157,969,667	9,892,197	167,861,864	2,613,615	2,716,999	5,330,614
Queensland ..	22,893,944	6,642,037	29,535,981	383,805	1,344,930	1,728,735
S. Australia ..	c 23,055,424	2,122,509	25,177,933	424,996	664,975	1,089,971
W. Australia	15,382,036	2,751,132	18,133,168	295,409	555,470	850,879
Tasmania ..	(d)	(d)	2,959,887	(d)	(d)	218,020
Total	(e)	(e)	371,770,017	(e)	(e)	15,295,207

(a) Within 34 miles of Sydney and Newcastle, including the Richmond line.
(b) Within 20 miles of Melbourne. (c) Within 25 miles of Adelaide. (d) Not available. (e) Incomplete.

Although the number of passenger journeys recorded in the metropolitan area in Victoria is considerably greater than in New South Wales, it must be borne in mind that in the latter State other transport facilities, viz., tramways, motor-omnibuses, and ferries, are more extensively used.

(iii) *Electrification of Melbourne Suburban Railways.* Electrification of the Melbourne Suburban Railways was completed in April, 1923. The scheme comprised the electrification of 143 route-miles of steam-operated railway, including sidings, and the conversion and construction of the necessary rolling stock. Particulars of the lines concerned were given in Year Book No. 15, p. 564.

(iv) *Country Lines.* As the traffic on main country lines develops, it is intended to convert to electric traction busy sections which are within reasonable distance of a cheap power supply, and investigations are being made in order to determine which lines offer prospects of financial success.

(v) *Goods Traffic.* (a) *Classification.* The differing conditions of the traffic in each State might also, to some extent, be analysed by an examination of the tonnage of various classes of commodities carried, and of the revenue derived therefrom. Comparative particulars regarding the quantities of some of the leading classes of commodities carried are available for all the States, and the following table shows the number of tons of various representative commodities carried, with the percentage of each class on the total for the financial year 1923-24 :—

RAILWAYS, STATE.—CLASSIFICATION OF COMMODITIES CARRIED, 1923-24.

State.	Minerals.	Fire-wood.	Grain and Flour.	Hay, Straw, and Chaff.	Wool.	Live Stock.	All other Commodities.	Total.
TONS CARRIED.								
New South Wales	10,010,275	190,346	1,175,533 ^c	522,478	111,597	742,611	2,940,287	15,693,127
Victoria	2,018,639 ^b	740,159	1,431,017	362,622	62,938	489,012	3,205,156	8,309,543
Queensland	1,235,043	224,468	731,783 ^e	401,593 ^f	65,614	464,199	1,151,226	4,273,926
South Australia	1,403,452	211,468	797,202	89,468	26,020	153,813	883,884	3,565,307
Western Australia	704,006	455,345	620,912	116,102	15,866	95,787	1,015,281	3,023,209
Tasmania	227,818 ^d	77,003	87,966 ^d	57,490	2,534	22,100	232,020	706,961
All States	15,599,233	1,898,789	4,844,443	1,549,753	284,569	1,967,522	9,427,854	35,572,163

PERCENTAGE ON TOTAL TONNAGE CARRIED.

	%	%	%	%	%	%	%	%
New South Wales	63.79	1.21	7.40	3.33	0.71	4.73	18.74	100.00
Victoria	24.29	8.91	17.22	4.36	0.76	5.89	38.57	100.00
Queensland	28.90	5.25	17.12	9.40	1.53	10.86	26.94	100.00
South Australia	39.37	5.93	22.36	2.51	0.73	4.31	24.79	100.00
Western Australia	23.29	15.06	20.54	3.84	0.52	3.17	33.58	100.00
Tasmania	32.22	10.89	12.45	8.13	0.36	3.13	32.82	100.00
All States	43.85	5.34	13.62	4.36	0.80	5.53	26.50	100.00

(a) Exclusive of departmental coal hitherto included. (b) Coal, stone, gravel, and sand. (c) Up journey only (to coast). (d) Agricultural produce. (e) Fruit and agricultural produce. (f) Sugar-cane.

(b) *Revenue.* The following table, shows the revenue derived from goods and live stock traffic during 1923-24 according to a classification which has been adopted by all States :—

RAILWAYS, STATE.—GOODS, etc., TRAFFIC—REVENUE, 1923-24.

Class.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Total.
	£	£	£	£	£	£	£
General merchandise	4,629,348	3,541,423	2,139,956	1,189,816	1,350,135	247,498	13,098,176
Wheat	a	563,040	a	307,902	283,793	a	1,154,740
Wool	491,583	143,223	388,097	57,272	53,220	4,695	1,138,090
Live stock	1,246,749	523,406	600,915	215,906	140,579	18,851	2,746,406
Minerals—							
Coal, coke, and shale	1,370,509	145,482	206,018	224,946	104,891	21,610 ^b	2,073,456
Others	358,085	287,943	153,001	562,864	118,084	26,014 ^c	1,505,991
Total	8,096,274	5,204,526	3,487,987	2,558,706	2,050,707	318,668	21,716,868

(a) Included with General Merchandise. (b) Native coal. (c) Minerals other than native coal.

In Victoria electric motor coaches are used for the transfer of parcels from the central stations to suburban stations, and also to convey luggage and parcels between the two main terminal stations.

12. *Passenger-Mileage and Ton-Mileage.*—(i) *Passenger-Miles.* The subjoined table gives particulars of passenger-mileage in respect of the States of New South Wales, Victoria, South Australia, and Tasmania for the years 1919-20 to 1923-24. The average

number of passengers carried per "train" is obtained by dividing the number of "passenger-miles" by the number of "passenger-train-miles." Similarly, the "density of traffic" is obtained by dividing the number of "passenger-miles" by the "average miles worked."

RAILWAYS, STATE.—SUMMARY OF "PASSENGER-MILES," 1920 TO 1924.

Year ended 30th June—	Passenger-Train-Mileage.	Number of Passenger Journeys.	Total Passenger-Miles.	Amount Received from Passengers.	Average Number of Passengers carried per Train.	Average Mileage per Passenger Journey.	Average Earnings per Passenger-Mile.	Average Fare per Passenger Journey.	Density of Traffic per Average Mile Worked.
	Miles. ('000 omitted.)	No. ('000 omitted.)	No. ('000 omitted.)	£	No.	Miles.	d.	d.	No.

NEW SOUTH WALES.

1920	11,136	114,655	1,632,627	5,137,247	151	14.24	0.74	10.75	328,761
1921	11,301	120,735	1,620,857	5,736,256	147	13.42	0.85	11.57	322,976
1922	11,379	121,299	1,610,619	5,934,616	145	13.27	0.88	11.74	320,936
1923	11,822	123,715	1,679,903	6,004,702	142	13.58	0.86	11.65	323,260
1924	12,385	128,101	1,721,161	6,076,988	139	13.44	0.85	11.39	315,216

VICTORIA.

1920	6,655	134,012	1,239,022	3,780,251	148	9.25	0.73	6.77	295,427
1921	8,822	134,046	1,205,052	4,398,124	138	8.99	0.88	7.87	284,412
1922	9,865	142,457	1,231,828	4,814,820	125	8.65	0.94	8.11	287,777
1923	10,626	155,957	1,332,694	5,094,595	125	8.54	0.92	7.84	308,892
1924	11,140	167,862	1,421,771	5,330,614	128	8.47	0.90	7.62	325,391

SOUTH AUSTRALIA.

1920	2,576	22,852	305,834	979,596	119	13.38	0.77	10.29	132,052
1921	2,815	23,788	280,904	1,019,480	100	11.81	0.87	10.29	120,438
1922	2,749	23,330	268,558	1,045,530	102	11.51	0.93	10.76	115,110
1923	2,833	24,481	282,387	1,078,155	100	11.54	0.92	10.57	119,718
1924	2,918	25,107	290,843	1,088,046	100	11.58	0.90	10.40	120,394

TASMANIA.

1920	472	2,268	46,015	209,866	97	20.29	1.09	22.21	72,465
1921	494	2,688	50,263	238,719	102	18.70	1.14	21.31	78,905
1922	662	2,758	46,550	233,608	70	16.88	1.15	20.33	73,336
1923	692	2,884	46,032	228,458	67	15.96	1.19	19.01	69,388
1924	672	2,960	46,766	218,020	70	15.80	1.11	17.68	70,036

The difference in the number of passenger journeys given in this table and that in connexion with traffic in respect of the State of South Australia is accounted for by the fact that the latter table is compiled from the receipts from passenger traffic, while the former is based on the passenger traffic carried.

(ii) *Ton-Miles.* Particulars regarding total "ton-miles" are given in the following table for each of the years 1919-20 to 1923-24 in respect of all States with the exception of Queensland :—

RAILWAYS, STATE.—SUMMARY OF "TON-MILES," 1920 TO 1924.

Year ended the 30th June—	Goods-Train-Mileage.	Total Tons Carried.	Total "Ton-miles."	Earnings.	Average Freight-paying Load carried per "Train."	Average Haul per Ton.	Earnings per "Ton-mile."	Density of Traffic per Average Mile Worked.
	No. (,000 omitted.)	No. (,000 omitted.)	No. (,000 omitted.)	£	Tons.	Miles.	d.	Tons.
NEW SOUTH WALES.								
1920	11,698	13,010	1,394,099	6,106,563	119	107.15	1.05	280,729
1921	11,491	15,262	1,418,386	6,501,914	123	92.94	1.10	282,631
1922	10,508	14,197	1,365,961	7,953,910	154	96.21	1.38	269,049
1923	9,871	13,567	1,166,238	7,868,769	160	85.96	1.60	224,417
1924	11,322	15,516	1,392,390	8,096,274	163	89.74	1.37	255,005
VICTORIA.								
1920	6,655	7,771	631,374	3,721,122	95	81.25	1.41	150,542
1921	6,711	7,573	727,930	4,411,276	137	96.12	1.45	171,803
1922	5,992	7,491	684,887	4,815,056	143	91.43	1.69	160,058
1923	5,768	7,517	673,904	4,953,192	145	89.65	1.76	156,198
1924	5,939	8,310	745,301	5,204,526	154	89.69	1.68	170,588
SOUTH AUSTRALIA.								
1920	2,616	2,579	196,534	1,556,224	75	76.21	1.90	84,859
1921	2,897	2,682	217,879	1,719,556	75	81.23	1.81	93,383
1922	2,881	2,828	284,269	2,000,716	99	100.53	1.68	121,253
1923	3,374	3,284	368,525	2,378,035	113	112.23	1.55	156,241
1924	3,269	3,565	384,576	2,558,706	129	107.87	1.60	159,195
WESTERN AUSTRALIA.								
1920	2,873	2,614	207,384	1,394,908	72	79.34	1.61	58,616
1921	2,865	2,604	200,379	1,637,979	70	76.95	1.96	56,633
1922	2,689	2,548	208,347	1,688,482	77	81.76	1.95	58,894
1923	2,659	2,624	210,151	1,768,211	93	80.08	2.02	59,164
1924	2,916	3,023	252,796	2,050,707	100	83.62	1.95	70,364
TASMANIA.								
1920	794	553	30,967	234,147	39	56.01	1.81	48,767
1921	893	650	33,638	302,594	38	51.78	2.15	52,807
1922	771	602	30,850	295,480	40	51.28	2.29	48,602
1923	743	547	27,297	275,968	37	49.29	2.42	41,147
1924	744	685	30,019	300,156	40	43.83	2.39	44,955

In New South Wales the tonnage carried is exclusive of coal, on which shunting and haulage charges only have been collected, and terminal charges have also been disregarded, but in the cases of South Australia and Tasmania such charges are included. Particulars for the latter State do not include live stock.

13. **Passenger Fares and Goods Rates.**—(i) *General.* Fares and rates are changed from time to time to suit the varying necessities of the railways, and when drought conditions prevail special concessions are made in the rates for the carriage of fodder and water and for the transfer of starving stock to other areas.

(ii) *Passenger Fares.* Two classes are provided for passenger traffic, and the fares charged may be grouped as follows:—(a) Fares between specified stations (including suburban fares). (b) Fares computed according to mileage rates. (c) Return, periodical and excursion fares. (d) Special fares for working men, school pupils, and others. Fares in class (a) are issued at rates lower than the ordinary mileage rates. Fares in class (b) are charged between stations not included in class (a).

The following table shows the passenger fares for different distances charged in each State between stations for which specific fares are not fixed:—

RAILWAYS, STATE.—ORDINARY PASSENGER MILEAGE RATES, 1924.

State.	For a Journey of—											
	50 Miles.		100 Miles.		200 Miles.		300 Miles.		400 Miles.		500 Miles.	
	First Class.	Second Class.	First Class.	Second Class.	First Class.	Second Class.	First Class.	Second Class.	First Class.	Second Class.	First Class.	Second Class.
New South Wales	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
Victoria	10 11	7 4	21 11	14 7	40 11	27 3	59 8	39 9	76 2	50 9	86 9	57 10
Queensland	9 9	6 6	18 11	12 7	37 9	25 2	52 9	35 2	64 0	42 8	75 3	50 1
South Australia	9 4	6 3	17 0	11 0	32 0	20 6	46 0	28 9	59 0	36 0	71 0	43 0
Western Australia	9 9	6 7	19 9	13 3	39 3	26 0	58 6	39 3	78 0	52 0	97 9	65 3
Tasmania	8 4	5 3	16 8	10 5	33 4	20 10	50 0	31 3	66 8	41 8	83 4	52 1
	10 6	6 9	20 9	13 9	41 0	27 6	61 3	41 0	..	..	..	..
Average	9 9	6 5	19 2	12 7	37 5	24 6	54 8	35 10	68 9	44 7	82 10	53 8
Average per passenger-mile	d. d.	d. d.	d. d.	d. d.	d. d.	d. d.	d. d.	d. d.	d. d.	d. d.	d. d.	d. d.
	2.34	1.54	2.30	1.51	2.24	1.47	2.19	1.43	2.06	1.34	1.99	1.29

(iii) *Parcel Rates.* Parcels may be transmitted by passenger train at rates based upon weight and distance carried. The charges vary slightly in the different States. In New South Wales they range from fivepence for a parcel not exceeding 3 lbs. for any distance up to 25 miles to eighteen shillings and eightpence for a parcel weighing from 85 lbs. to 112 lbs. for a distance of 500 miles. In Victoria the charge for a parcel weighing from 84 lbs. to 112 lbs. for a distance of 450 miles is sixteen shillings and elevenpence. The rate in Queensland for a parcel weighing from 85 lbs. to 112 lbs. for 500 miles is sixteen shillings and threepence; in South Australia for 550 miles seventeen shillings and fourpence; in Western Australia for a parcel weighing from 99 lbs. to 112 lbs. for 500 miles fifteen shillings and sixpence; and in Tasmania for a distance of 250 miles the rate is eight shillings.

(iv) *Goods Rates.* (a) *General.* The rates charged for the conveyance of goods and merchandise may be divided into three classes, viz.:—(a) Mileage rates, (b) District or "development" rates, and (c) Commodity rates. In each of the States there is a number—ranging from nine in Victoria to fifteen in Tasmania—of different classes of freight. Most of the mileage rates are based upon a tapering principle, i.e., a lower charge per ton-mile is made for a long haul than for a short haul; but for some classes of freight there is a fixed rate per mile irrespective of distance. District rates are charged between specified stations, and are somewhat lower than the mileage rates. In addition to the ordinary classification of freights under class (a), certain commodities, such as wool, grain, agricultural produce, and crude ores, are given under class (c) special rates, lower than the mileage rates.

Limits of space preclude a detailed analysis of goods rates in the several States, but the subjoined tables give an indication of the range and amount of the rates for the highest and lowest class freights and for agricultural produce at 30th June, 1924.

(b) *Highest and Lowest Class Freights.* The ordinary mileage rates charged per ton for hauls of different distances in respect of (a) the highest-class freight and (b) the lowest-class freight are given hereunder :—

RAILWAYS, STATE.—HIGHEST AND LOWEST CLASS FREIGHT RATES, 1924.

State.	Charge per Ton for a Haul of—											
	50 Miles.	100 Miles.	200 Miles.	300 Miles.	400 Miles.	500 Miles.	50 Miles.	100 Miles.	200 Miles.	300 Miles.	400 Miles.	500 Miles.
	Highest Class Freight.						Lowest Class Freight.					
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
N.S. Wales	39 2	76 8	130 10	160 0	180 0	197 6	5 0	6 9	8 5	10 0	11 3	12 4
Victoria ..	32 6	63 3	119 3	163 0	200 6	238 3	3 6	5 4	7 10	10 6	11 8	12 8
Queensland	51 10	89 4	159 8	220 6	254 1	268 4	3 10	4 2	8 4	9 5	12 6	15 8
South Aust.	40 10	78 0	145 11	200 2	247 10	288 6	4 3	8 0	13 9	18 0	22 3	26 6
Westn. Aust.	47 1	77 1	131 10	177 9	215 4	246 8	3 3	4 1	6 2	8 3	10 4	12 5
Tasmania ..	46 1	72 9	134 1	186 4	..	..	6 2	10 10	14 2	15 10	..	..
Average ..	42 11	76 2	136 11	184 7	219 7	247 10	4 4	6 6	9 9	12 0	13 7	15 11
Average per ton-mile	d. 10.30	d. 9.14	d. 8.21	d. 7.38	d. 6.59	d. 5.95	d. 1.04	d. 0.78	d. 0.58	d. 0.48	d. 0.41	d. 0.38

(a) Maximum freight for distances up to 500 miles on highest-class goods to Western stations is 210 shillings per ton.

The only change in the rates from the preceding year was an increase in those for lowest class freights in Tasmania for distances up to 100 miles and a decrease in respect of distances over 100 miles.

Generally, the highest-class freight includes expensive, bulky, or fragile articles, while the lowest-class comprises many ordinary articles of merchandise, particularly those identified or connected with the primary industries.

In New South Wales, for example, the highest-class freight comprises such articles as boots, drapery, drugs, groceries, furniture, liquors, crockery and glassware, cutlery, ironmongery, confectionery, and carpets. In the same State the lowest-class freight includes agricultural produce, ores, manures, coal, coke, shale, firewood, limestone, stone, slate, bricks, screenings, rabbit-proof netting, timber, and posts and rails.

(c) *Agricultural Produce.* The rates at 30th June, 1924, for agricultural produce in truck loads are given in the table below :—

RAILWAYS, STATE.—RATES FOR AGRICULTURAL PRODUCE, 1924.

State.	Charge per Ton in Truck-loads for a Haul of—					
	50 Miles.	100 Miles.	200 Miles.	300 Miles.	400 Miles.	500 Miles.
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
New South Wales ..	7 3	11 5	14 5	16 1	17 9	19 0
Victoria ..	6 4	9 9	12 11	14 10	16 10	18 7
Queensland ..	5 8	10 2	12 0	13 0	14 6	15 6
South Australia ..	7 5	11 5	14 1	16 7	18 10	21 1
Western Australia ..	8 3	10 11	14 1	19 0	24 0	28 0
Tasmania ..	8 4	12 11	20 0	27 6	..	..
Average ..	7 3	11 1	14 7	17 10	18 4	20 0
Average per ton-mile	d. 1.73	d. 1.33	d. 0.88	d. 0.71	d. 0.55	d. 0.48

The principal variation in the rates quoted as compared with the previous year was a general reduction of 10 per cent. in the State of Victoria.

14. Rolling Stock, 1924.—The following table shows the rolling stock in use at the 30th June, 1924, classified according to gauge:—

RAILWAYS, STATE.—ROLLING STOCK, 1924.

State.	Gauge.					Total.
	5 ft. 3 in.	4 ft. 8½ in.	3 ft. 6 in.	2 ft. 6 in.	2 ft. 0 in.	
New South Wales	..	1,375	..	..	..	1,375
Victoria ..	745	..	..	17	..	762
Queensland ..	..	..	706	..	7	713
South Australia..	256	..	230	..	..	486
Western Australia	..	..	406	..	..	406
Tasmania ..	..	..	89	..	7	96
All States ..	1,001	1,375	1,431	17	14	3,833

LOCOMOTIVES.

New South Wales	..	1,375	..	..	..	1,375
Victoria ..	745	..	..	17	..	762
Queensland ..	..	..	706	..	7	713
South Australia..	256	..	230	..	..	486
Western Australia	..	..	406	..	..	406
Tasmania ..	..	..	89	..	7	96
All States ..	1,001	1,375	1,431	17	14	3,833

COACHING STOCK.

	Ordinary.	With Motors.	Ordinary.	With Motors.	Ordinary.	With Motors.			Ordinary.	With Motors.
New South Wales	..	..	2,188	6	..	..	..	..	2,188	6
Victoria ..	2,222	371	..	..	..	..	55	..	2,277	371
Queensland ..	..	..	..	..	1,058	16	..	9	1,067	16
South Australia..	495	9	..	..	220	2	..	..	715	11
Western Australia	..	..	..	..	479	3	..	..	479	3
Tasmania ..	..	..	..	..	228	4	..	6	234	4
All States ..	2,717	380	2,188	6	1,985	25	55	15	6,960	411

STOCK OTHER THAN COACHING.

New South Wales	..	23,876	..	..	..	23,876
Victoria ..	19,721	..	..	243	..	19,964
Queensland ..	..	..	15,467	..	168	15,635
South Australia..	4,238	..	5,650	..	..	9,888
Western Australia	..	..	10,167	..	..	10,167
Tasmania ..	..	..	1,781	..	77	1,858
All States ..	23,959	23,876	33,065	243	245	81,388

Prior to the issue of Year Book No. 16 (1921-22) the particulars of rolling stock were classified under the headings of "Locomotives," "Passenger Vehicles," and "Vehicles other than Passenger." The present classification has now been adopted by all States.

15. Employees.—The following table gives the number of railway employees in each year from 1920 to 1924 inclusive, classified according to (a) salaried staff, and (b) wages staff :—

RAILWAYS, STATE.—EMPLOYEES, 1920 TO 1924.

State.	At 30th June—									
	1920.		1921.		1922.		1923.		1924.	
	Salaried Staff.	Wages Staff.	Salaried Staff.	Wages Staff.	Salaried Staff.	Wages Staff.	Salaried Staff.	Wages Staff.	Salaried Staff.	Wages Staff.
New South Wales	5,084	23,199	5,257	36,481	5,302	36,037	5,356	34,271	5,473	36,127
Victoria ..	2,727	21,824	2,703	24,427	3,097	23,791	4,030	22,577	4,083	23,400
Queensland ..	3,658	17,388	3,524	14,598	3,458	14,862	3,250	17,621	3,298	16,380
South Australia ..	1,004	8,122	1,041	8,326	1,116	8,448	1,108	8,429	1,208	9,438
Western Australia	1,115	6,553	1,187	6,896	1,175	6,330	1,180	6,259	1,224	6,510
Tasmania ..	210	1,330	205	1,454	215	1,491	216	1,842	190	1,406
All States ..	13,798	88,416	13,917	92,182	14,363	90,959	15,140	90,999	15,476	93,261

(a) Including those absent on military or naval service.

In the period under review the totals of salaried and wages staffs rose from 102,214 in 1920 to 103,737 in 1924, an increase of over 6 per cent.

16. Accidents.—(i) *Classification.* The following classification of accidents which occurred through the movement of rolling stock was adopted by each State in 1921–22, and particulars for the year 1923–24 in accordance therewith are given hereunder :—

RAILWAYS, STATE.—ACCIDENTS, 1924.

Particulars.	N.S.W.		Vic.		Q'land. (a)		S. Aust.		W. Aust.		Tas.		All States. (b)	
	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.
Passengers—														
Through causes beyond their own control ..	..	23	..	3	..	..	19	..	9	..	6	..	..	60
Through contributory negligence ..	2	1	..	4	..	..	1	..	..	..	..	2	..	6
Solely through their own negligence ..	7	147	8	112	..	..	1	59	2	44	1	..	19	362
Employees in the execution of their duty—														
Through causes beyond their own control ..	..	19	..	29	..	..	2	46	4	104	..	1	6	199
Through contributory negligence ..	..	54	2	36	..	..	1	..	23	1	27	3	141	..
Solely through their own negligence ..	16	186	8	146	..	..	1	54	..	6	2	..	27	392
Employees proceeding to or from their duty within Railway boundaries ..	2	7	3	2	..	..	2	2	..	..	..	..	7	11
Persons killed or injured at crossings ..	11	19	10	15	..	..	8	16	3	6	1	1	33	57
Trespassers ..	29	13	18	2	..	..	..	1	7	2	..	1	54	19
Miscellaneous ..	10	57	2	13	..	..	2	12	..	18	..	..	14	100
Total ..	77	526	51	362	..	..	16	211	16	212	5	36	165	1,347
Number of passengers killed or injured through causes beyond their own control, per million carried ..	..	.180	..	.017	..	..	..	.754	..	.500	..	1.986	..	.161

(a) Not available.

(b) Exclusive of Queensland.

(ii) *Particulars for Quinquennium.* The subjoined table gives particulars of the number of persons killed and injured through train accidents and the movement of rolling stock on the Government railways in each State for each of the years 1920 to 1924 inclusive :—

RAILWAYS, STATE.—ACCIDENTS, 1920 TO 1924.

State.	In year ended 30th June—									
	1920.		1921.		1922.		1923.		1924.	
	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.
New South Wales	70	751	68	554	67	467	45	493	77	526
Victoria ..	38	451	41	597	58	403	51	372	51	362
Queensland ..	18	392	20	554	18	564	17	563	(a)	(a)
South Australia ..	13	157	12	174	6	192	16	262	16	211
Western Australia	30	127	18	134	15	107	14	147	16	212
Tasmania ..	3	31	..	47	2	34	1	34	5	36
All States ..	172	1,909	159	2,060	166	1,772	144	1,876	(b)165	(b)1,347

(a) Not available.

(b) Incomplete.

§ 4. Government Railways Generally.

1. *Summary, Federal and State Government Railways.*—In the following table a summary is given of the working of all Federal and State Government railways for the year ended 30th June, 1924 :—

RAILWAYS, FEDERAL AND STATE.—SUMMARY, 1924.

Particulars.	Federal Railways.	State Railways.	Total for Australia.
Total mileage open Miles	1,733.02	22,750.87	24,483.89
Average miles open during the year	1,733	22,466	24,199
Total train mileage	770,414	64,875,546	65,645,960
Total cost of construction of lines open £	11,499,872	251,793,227	263,293,099
Cost per mile £	6,636	(a)11,067	10,754
Gross revenue £	353,426	41,031,515	41,384,941
Working expenses £	475,177	30,376,097	30,851,274
Percentage of working expenses on gross revenue %	134.45	74.03	74.55
Net revenue £	— 121,751	10,655,418	10,533,667
Interest payable £	235,239	11,858,728	12,093,967
Number of passenger journeys No.	135,589	371,770,017	371,905,606
Tonnage of goods and live stock carried Tons	123,708	35,572,163	35,695,871
Number of employees at 30th June, 1924—			
Salaried No.	176	15,476	15,652
Wages	868	93,261	94,129
Number of persons killed and injured during the year through train accidents and movement of rolling stock—			
Killed	2	(b)165	(b)167
Injured	17	(b)1,347	(b)1,364

(a) Exclusive of cost of lines from Mount Gambier to Victorian border, and from Murrayville to Victorian border. (b) Exclusive of Queensland.

NOTE.—(—) Denotes a loss on working.

A graph which accompanies this chapter illustrates the total capital cost, mileage open, average cost per mile open, gross revenue, working expenses, and net revenue for each of the years 1870 to 1924.

2. Mileage Open for Traffic.—(i) Route Mileage. The Government railway route mileages open for traffic, classified according to gauge, as at the 30th June in each of the years 1921 to 1924 are set out in the following table, which gives also the percentages of each mileage on the total on the mainland—the figures for Tasmania being shown separately, as in the case of the table hereinafter relating to rolling stock :—

RAILWAYS, FEDERAL AND STATE.—ROUTE MILEAGE, 1921 TO 1924.

Gauge.	At 30th June—							
	1921.		1922.		1923.		1924.	
	Miles.	%	Miles.	%	Miles.	%	Miles.	%
Mainland—								
5 ft. 3 in. ..	5,268.28	23.24	5,342.60	23.37	5,375.09	23.15	5,503.37	23.12
4 ft. 8½ in. ..	6,059.66	26.74	6,132.96	26.83	6,334.67	27.28	6,539.68	27.46
3 ft. 6 in. ..	11,185.41	49.36	11,233.01	49.14	11,355.71	48.91	11,615.91	48.78
2 ft. 6 in. ..	121.90	0.53	121.90	0.53	121.77	0.53	121.77	0.51
2 ft. 0 in. ..	30.26	0.13	30.26	0.13	30.26	0.13	30.26	0.13
Total ..	22,665.51	100.00	22,860.73	100.00	23,217.50	100.00	23,810.99	100.00
Tasmania—								
3 ft. 6 in. ..	606.26	..	611.97	..	638.55	..	648.07	..
2 ft. 0 in. ..	23.58	..	24.83	..	24.83	..	24.83	..
Grand Total	23,295.35	..	23,497.53	..	23,880.88	..	24,483.89	..

In the four years from 1921 to 1924 the 5-ft. 3-in. gauge percentage has not changed materially, but, while the 4-ft. 8½-in. gauge has risen by 0.72, the 3-ft. 6-in. gauge has fallen by 0.68.

(ii) Track Mileage. The following table gives the track mileages of all Government railways and sidings, exclusive of Tasmania, for the years ended 30th June, 1921 to 1924, classified according to gauge, together with the percentages of each mileage on the total :—

RAILWAYS, FEDERAL AND STATE.—TRACK MILEAGE (a), 1921 TO 1924.

Gauge.	At 30th June—							
	1921.		1922.		1923.		1924.	
	Miles.	%	Miles.	%	Miles.	%	Miles.	%
5 ft. 3 in. ..	6,671.62	24.67	6,756.56	24.81	6,930.03	25.03	7,076.24	24.76
4 ft. 8½ in. ..	7,827.13	28.96	7,923.12	29.08	8,177.04	29.54	8,424.07	29.47
3 ft. 6 in. ..	12,376.10	45.77	12,398.50	45.51	12,412.02	44.83	12,915.09	45.19
2 ft. 6 in. ..	131.07	0.48	131.09	0.48	131.54	0.48	131.54	0.46
2 ft. 0 in. ..	34.00	0.12	34.00	0.12	34.00	0.12	33.00	0.12
Total ..	27,039.92	100.00	27,243.27	100.00	27,684.63	100.00	28,579.94	100.00

(a) Exclusive of Tasmania.

3. **Rolling Stock.**—The numbers of the rolling stock employed on both the Federal and State Government railways are set out hereunder, classified according to gauge, as at the 30th June, 1924, together with the percentage of the numbers for each gauge on the total for the mainland. The figures for Tasmania are shown separately from those for the mainland.

RAILWAYS, FEDERAL AND STATE.—ROLLING STOCK, 1924.

Gauge.	Locomotives.		Coaching Stock.						Vehicles other than Coaching.	
			Ordinary.		With Motors.		Total.			
	No.	%	No.	%	No.	%	No.	%	No.	%
Mainland—										
5 ft. 3 in. ..	1,001	26.18	2,717	40.05	380	93.36	3,097	43.06	23,959	29.73
4 ft. 8½ in. ..	1,443	37.73	2,237	32.97	6	1.48	2,243	31.19	24,611	30.53
3 ft. 6 in. ..	1,356	35.46	1,767	26.04	21	5.16	1,788	24.86	31,616	39.23
2 ft. 6 in. ..	17	0.44	55	0.81	..	..	55	0.78	243	0.30
2 ft. 0 in. ..	7	0.19	9	0.13	..	..	9	0.13	168	0.21
Total ..	3,824	100.00	6,785	100.00	407	100.00	7,192	100.00	80,597	100.00
Tasmania—										
3 ft. 6 in. ..	89	..	228	..	4	..	232	..	1,781	..
2 ft. 0 in. ..	7	..	6	..	..	..	6	..	77	..
Grand Total	3,920	..	7,019	..	411	..	7,430	..	82,455	..

The present classification was adopted by the Conference of Railways Commissioners in 1921.

§ 5. Private Railways.

1. **Classification.**—A list of private railways, including those open to the public for general traffic and for special purposes, is given in "Transport and Communication Bulletin, No. 16," but, owing to limitations of space, it is not possible to include the information in this volume.

2. **Total Mileage Open, 1923–24.**—As stated in a previous page, a number of private railway lines have from time to time been constructed in Australia. Most of these lines, however, have been laid down for the purpose of hauling timber, sugar-cane, coal, or other minerals, and they are not generally used for the conveyance of passengers or for public traffic. In many cases the lines are practically unballasted and easily removable, and they run through bush country in connexion with the timber and sugar-milling industries, and for conveying firewood for mining purposes. Private railways referred to herein include (a) lines open to the public for general passenger and goods traffic; and (b) branch lines from Government railways and other lines which are used for special purposes and which are of a permanent description. Other lines are referred to in the part of this chapter dealing with Tramways (see C. *Tramways*).

The following table gives particulars of private railways open for traffic for general and special purposes during 1923–24. A classification of these lines according to gauge has already been given in § 1.

RAILWAYS, PRIVATE.—MILEAGE OPEN, 1923-24.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	All States.
	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.
For general traffic	143.38	27.74	286.06	33.80	278.35	194.86	964.19
For special purposes	180.95	33.92	1,015.81	16.10	547.60	40.62	1,835.00
Total	324.33	61.66	1,301.87	49.90	825.95	235.48	2,799.19

3. Lines Open for General Traffic.—The following statement shows in tabular form for each State the particulars of the operations of private railways open for general traffic for the year 1924. More detailed information regarding these lines will be found in "Transport and Communication Bulletin No. 16," published by this Bureau.

RAILWAYS, PRIVATE.—SUMMARY, 1923-24.

State.	Companies from which returns were received.	Miles Open (Route).	Train-Miles.	Capital Cost.	Gross Revenue.	Working Expenses.	Rolling Stock.			Passenger Journeys.	Tons of Goods, etc.	No. of Employees.
							Locomotives.	Coaches.	Other Vehicles.			
	No.	Miles.	No.	£	£	£	No.	No.	No.	No.	Tons.	No.
New South Wales ..	9	143.38	750,309	2,478,861	421,251	313,189	55	39	822	1,118,706	1,118,740	662
Victoria ..	3	27.74	67,095	87,007	19,294	21,283	5	9	42	382,339	40,880	25
Queensland	15	286.06	57,670	515,706	37,800	38,475	18	22	374	66,742	32,053	87
South Australia ..	1	33.80	85,546	(a)	(a)	(a)	7	3	162	1,441	565,565	59
West Australia ..	1	278.35	240,131	2,063,926	157,071	78,141	18	20	400	60,503	115,068	210
Tasmania	6	194.86	173,815	1,282,979	98,986	98,537	26	19	421	52,295	129,422	260
All States(b)	35	964.19	1,374,566	6,428,479	734,402	549,625	129	112	2,221	1,682,026	2,001,728	1,303

(a) Not available.

(b) Incomplete.

The particulars given in the table are incomplete in respect of the States of New South Wales, Queensland, South Australia, and Tasmania. In New South Wales and Queensland several of these lines, although owned by private companies, are operated by the Government Railway Departments, and Government rolling stock is used thereon.

§ 6. Comparative Railway Statistics, Various Countries.

A table has been given showing the railway facilities in 1923-24 in the States, in the Northern Territory, and in the Commonwealth, the railway mileage open for traffic being compared both with the area and population.

In the table below, comparative railway statistics of a like character are given in respect of the principal countries of the world at certain dates. The dates have been so chosen as to bring into relation the latest accurate figures for both population and railway mileage.

RAILWAYS, VARIOUS COUNTRIES.—MILEAGE, POPULATION, AND AREA.

Country.	Year.	Miles of Railway.	Miles of Railway.	
			Per 1,000 of Population.	Per 1,000 Sq. Miles of Territory.
Europe—				
Great Britain and Ireland	1922	23,952	0.50	196.92
Belgium	1921	6,856	0.91	583.39
Denmark	1923	2,662	0.81	155.27
France	1923	25,766	0.66	121.16
Germany	1922	34,583	0.58	189.73
Greece	1920	1,470	0.27	35.06
Italy	1922	10,269	0.26	92.82
Netherlands	1922	2,392	0.34	181.14
Norway	1922	2,148	0.81	17.19
Portugal	1920	2,040	0.34	57.48
Spain	1920	9,504	0.44	48.79
Sweden	1922	9,548	1.59	55.18
Switzerland	1923	3,422	0.88	214.21
Asia—				
India	1923	37,618	0.12	20.87
Japan	1923	7,011	0.09	26.89
Africa—				
Egypt	1923	3,058	0.22	8.74
Union of South Africa	1923	11,558	1.67	24.43
America, North and Central—				
Canada	1923	41,830	4.76	11.22
Mexico	1920	10,754	0.69	14.02
United States	1921	262,544	2.48	86.74
America, South—				
Argentina	1923	22,164	2.53	19.22
Brazil	1922	18,110	0.59	5.53
Chile	1922	5,642	1.50	19.47
Australasia—				
Australia	1924	27,283	4.65	9.17
New Zealand	1923	3,172	2.45	30.54

The figures show that per 1,000 of population Canada had the greatest mileage (in 1923), 4.76 miles; the next in magnitude being Australia (1924), with 4.65 miles.

The least mileage per 1,000 of population is shown in the case of Japan (1923), with 0.09 mile, followed by India (1923), with 0.12 mile.

With regard to the mileage per 1,000 square miles of territory, Belgium (1921) with 583.39 miles was easily first, followed by Switzerland (in 1923) with 214.21 miles, and Great Britain and Ireland (1922) 196.92 miles.

The least mileage open per 1,000 square miles is that of Brazil (in 1922) with 5.53 miles, and Egypt (1923) with 8.74 miles.

C. TRAMWAYS.

1. Systems in Operation.—(i) *General.* Tramway systems are in operation in all the States, and in recent years considerable progress has been made in the adoption of electrical traction, the benefit of which is now enjoyed by a number of the larger towns.

In many parts of Australia private lines used for special purposes in connexion with the timber, mining, sugar, or other industries are often called tramways, but they

are really private railways, and the traffic on them has nothing in common with that of the street tramways for the conveyance of passengers, which are dealt with in the present paragraph.

(ii) *Total Mileage Open and Classification of Lines.* The following tables show the total mileage of tramway lines open for general passenger traffic for the year 1923-24, and also in Australia as a whole for the years 1919-20 to 1923-24, classified (a) according to the nature of the authority by which the lines are controlled; (b) according to the motive power utilized, and (c) according to gauge:—

TRAMWAYS.—ROUTE MILEAGE OPEN, 1923-24.

Nature of Motive Power, and Gauge.	N.S. Wales.	Victoria.	Q'land.	South Australia.	Western Australia.	Tasmania.	Total, Australia.
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GOVERNMENT.

		Miles.	Miles.	Miles.	Miles.	Miles.	Miles.
Electric	169.50	79.78	47.13	..	34.24	..	330.65
Steam	58.07	..	..	..	17.75	..	75.82
Cable .. ..	..	45.58	..	..	..	..	45.58
Horse .. ..	..	..	..	..	7.39	..	7.39
Total	227.57	125.36	47.13	..	59.38	..	459.44

MUNICIPAL.

Electric .. ..	..	..	..	73.83	8.61	26.64	109.08
Steam .. ..	..	..	6.65	..	..	..	6.65
Total .. ..	..	..	6.65	73.83	8.61	26.64	115.73

PRIVATE.

Electric .. ..	..	27.69	..	..	14.82	..	42.51
Steam	3.50	..	..	..	..	..	3.50
Total	3.50	27.69	..	..	14.82	..	46.01

ALL CONTROLLING AUTHORITIES.

Electric	169.50	107.47	47.13	73.83	57.67	26.64	482.24
Steam	61.57	..	6.65	..	17.75	..	85.97
Cable .. ..	..	45.58	..	..	..	..	45.58
Horse .. ..	..	..	..	..	7.39	..	7.39
Total	231.07	153.05	53.78	73.83	82.81	26.64	621.18

ACCORDING TO GAUGE.

Gauge—							
5 ft. 3 in. ..	..	5.18	..	..	..	..	5.18
4 ft. 8½ in. ..	231.07	147.87	47.13	73.83	..	..	499.90
3 ft. 6 in. ..	..	..	6.65	..	65.43	26.64	98.72
2 ft. 0 in. ..	..	..	..	..	17.38	..	17.38
Total	231.07	153.05	53.78	73.83	82.81	26.64	621.18

TRAMWAYS.—ROUTE MILEAGE OPEN, AUSTRALIA, 1919-20 TO 1923-24.

Nature of Motive Power, Controlling Authority, and Gauge.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
ACCORDING TO MOTIVE POWER.					
Electric	Miles. 443.03	Miles. 445.10	Miles. 456.37	Miles. 460.18	Miles. 482.24
Steam	98.86	97.73	98.38	93.81	85.98
Cable	45.90	45.90	45.90	45.90	45.58
Horse	5.29	8.03	7.79	8.02	7.39
Total	593.08	596.76	608.44	607.91	621.19
ACCORDING TO CONTROLLING AUTHORITY.					
Government	393.60	397.98	403.75	448.65	459.45
Municipal	103.82	104.19	110.57	113.25	115.73
Private	95.66	94.59	94.12	46.01	46.01
Total	593.08	596.76	608.44	607.91	621.19
ACCORDING TO GAUGE.					
Gauge—					
5 ft. 3 in.	5.16	5.16	5.16	5.18	5.18
4 ft. 8½ in.	484.57	486.42	495.70	490.85	499.91
3 ft. 6 in.	86.20	88.03	90.67	94.50	98.72
2 ft. 0 in.	17.15	17.15	16.91	17.38	17.38
Total	593.08	596.76	608.44	607.91	621.19

The mileage of electric tramways has steadily increased during the period dealt with above. The increase in the Government-controlled tramways in 1923 was in some measure due to the transfer of the Brisbane Tramways from a private company to the Brisbane Tramway Trust.

(iii) *Cost of Construction and Equipment.* The table hereunder shows, as far as information is available, the total cost of construction and equipment of all tramways to the 30th June, 1924, classified according to the nature of the motive power and the controlling authority.

TRAMWAYS.—COST OF CONSTRUCTION AND EQUIPMENT, 1923-24.

Nature of Motive Power.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Australia.
GOVERNMENT.							
Electric	£ 9,782,825	£ 2,694,172	£ 1,615,282	£ ..	£ 879,277	£ ..	£ 14,971,556
Steam ..	689,133	..	..	..	72,575	..	761,708
Cable ..	..	2,393,655	..	..	..	..	2,393,655
Horse ..	..	..	..	..	15,899	..	15,899
Total ..	10,471,958	5,087,827	1,615,282	..	967,751	..	18,142,818
MUNICIPAL.							
Electric	..	..	..	2,742,985	145,438	541,941	3,430,364
Steam	..	..	53,129	..	..	..	53,129
Total	..	..	53,129	2,742,985	145,438	541,941	3,483,493

TRAMWAYS.—COST OF CONSTRUCTION AND EQUIPMENT, 1923-24—*continued*.

Nature of Motive Power.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Australia.
PRIVATE.							
Electric	£	£		£	£	£	£
Steam ..	..	352,271		..	452,318	..	804,589
	(a)	..		..	..	..	(a)
Total ..	(a)	352,271		..	452,318	..	804,589
ALL CONTROLLING AUTHORITIES.							
Electric	9,782,825	3,046,443	1,615,282	2,742,985	1,477,033	541,941	19,206,509
Steam ..	(b) 689,133	..	53,129	..	72,575	..	(b) 814,837
Cable ..	..	2,393,655	..	..	..	..	2,393,655
Horse ..	..	..	..	..	15,899	..	15,899
Total ..	10,471,958	5,440,098	1,668,411	2,742,985	1,565,507	541,941	22,430,900

(a) Not available.

(b) Incomplete.

2. New South Wales.—(i) *Government Tramways.* (a) *General.* The tramways, with some comparatively unimportant exceptions, are the property of the Government, and are under the control of the Railway Commissioners. In Sydney and suburbs the Government tramways are divided into distinct systems. There were in June, 1924, seven such systems in operation within the metropolitan area, five of which are operated by electricity and two by steam. The conversion of the Newcastle system from steam to electric traction has been undertaken, and at 30th June, 1924, 8.99 miles (route) were completed and opened for traffic.

(b) *Particulars of Working.* The subjoined statement gives particulars of the working of the electric and steam tramways in Sydney, and of other tramways under Government control in 1923-24:—

GOVERNMENT TRAMWAYS.—NEW SOUTH WALES.—RETURNS FOR 1923-24.

Line.	Mileage Open for Traffic.		Total Cost of Construction and Equipment. (a)	Gross Revenue.	Working Expenses.	Net Earnings.	Interest.	Profit or Loss.	Percentage of Working Expenses on Gross Revenue.	Percentage of Net Earnings on Capital Cost.
	Route.	Track.								
	Miles.	Miles.	£	£	£	£	£	£	%	%
Sydney and Suburban—Electric	160.51	296.10	8,955,747	3,391,626	2,781,148	610,478	458,054	152,424	82.00	6.82
Steam	8.19	9.62	51,474	25,106	34,478	— 9,372	2,799	— 12,171	137.33	— 18.21
Total	168.70	305.72	9,007,221	3,416,732	2,815,626	601,106	460,853	140,253	82.41	6.67
Parramatta—Steam	2.12	2.12	16,589	5,342	9,827	— 4,485	934	— 5,419	183.06	— 2.70
Sutherland to Cronulla—Steam	7.40	7.40	51,684	16,743	20,414	— 3,671	2,759	— 6,430	121.03	— 7.10
Newcastle—Electric and steam	35.24	47.10	1,278,527	170,714	212,094	— 41,380	61,322	— 102,702	124.24	— 3.24
East to West Maitland—Steam	4.06	4.06	33,510	8,720	9,486	— 766	1,784	— 2,550	108.78	— 2.29
Broken Hill—Steam	10.05	11.44	84,427	15,664	24,084	— 8,420	4,535	— 12,955	153.75	— 9.97
Total	227.57	377.84	10,471,958	3,633,915	3,091,531	542,384	532,187	10,197	85.07	5.18

(a) Excludes Stores Advance Account.

—Indicates a loss.

(c) *Capital Cost.* The capital cost shown in the preceding table was made up as follows:—

GOVERNMENT TRAMWAYS.—NEW SOUTH WALES.—CAPITAL COST, 1924.

Permanent Way.	Rolling Stock.	Power-houses, Sub-stations, and Plant.	Machinery.	Work-shops.	Furniture.	Total.
£	£	£	£	£	£	£
5,442,356	2,382,127	2,176,116	210,240	258,727	2,392	10,471,958

The average cost per mile open was £23,914 for permanent way, and £22,101 for all other charges, making a total of £46,015 per mile.

During the year 1923-24, six new extensions, 2.67 miles in length, were opened for traffic.

(d) *Summary, Government Tramways.* The following table gives a summary of the operations of all Government tramways for the years 1920 to 1924:—

GOVERNMENT TRAMWAYS.—NEW SOUTH WALES.—SUMMARY, 1920 TO 1924.

Year ended 30th June—	Mileage Open for Traffic. (Route.)	Total Cost of Construction and Equipment.	Gross Revenue.	Working Expenses.	Net Earnings.	Interest	Percentage of Working Expenses on Gross Revenue.	Percentage of Net Earnings on Capital Cost.	Passengers carried.	Persons employed.
	Miles.	£	£	£	£	£	%	%	No. '000	No.
1920 ..	225.81	8,768,548a	2,881,797	2,486,121	395,676	404,125	86.27	4.51	324,885	8,070
1921 ..	227.29	9,060,757a	3,471,737	2,943,251	528,486	421,814	84.78	5.83	337,690	9,018
1922 ..	229.26	9,505,732a	3,610,135	3,015,616	594,519	467,328	83.53	6.26	330,939	9,734
1923 ..	224.90	9,975,031a	3,593,114	3,092,306	505,808	500,274	85.04	5.08	331,002	9,897
1924 ..	227.57	10,471,958a	3,633,915	3,001,531	542,384	532,187	85.07	5.18	340,803	10,608

(a) £47,455 of this sum has been paid from the Consolidated Revenue, and no interest is payable thereon.

Cost of construction and equipment for the year 1923-24 is exclusive of the amount of the Stores Advance Account (£287,000).

The net result in 1924, after providing for all working expenses and £532,187 for interest on the capital invested, was a profit of £10,197 as compared with a profit of £5,534 in the preceding year. During the year 1923-24, 340,802,682 passengers were carried, an increase of 9,800,860 as compared with the previous year.

(e) *Sydney Tramways.* Official Year Book No. 15, p. 589, gives a short account of the progress of the Sydney Tramway System. Owing to limitations of space this information cannot be repeated, but the subjoined table shows certain important particulars for the years 1920 to 1924 inclusive.

ELECTRIC TRAMWAYS.—SYDNEY.—SUMMARY, 1920 TO 1924.

Particulars.	Year ended 30th June—				
	1920.	1921.	1922.	1923.	1924.
Mileage open for traffic—					
Route miles	155.35	156.81	158.78	158.99	160.51
Track miles	276.00	278.75	283.07	283.28	296.10
Total cost of construction and equipment £	7,842,549	8,009,611	8,343,096	8,680,161	8,955,747
Current used for traction purposes kilowatt hours ..	92,074,950	97,193,560	99,477,210	88,655,678	96,448,720a
Tram miles run No.	25,394,701	27,112,029	27,768,543	28,562,113	30,318,516
Passengers carried No.	304,986,683	315,847,363	310,037,935	312,930,225	320,402,789
Gross revenue £	2,676,748	3,216,358	3,353,768	3,375,923	3,301,626
Working expenses £	2,246,674	2,649,132	2,700,686	2,759,914	2,781,148
Net revenue £	430,074	567,226	653,082	616,009	610,478
Percentage of working expenses on gross revenue %	83.93	82.36	80.53	81.75	82.00
Cars in use	1,394	1,414	1,427	1,531	(a) 1,570
Persons employed	8,440	8,352	9,177	9,150	(a) 10,608

(a) Includes portion of Newcastle line in process of electrification.

The current for the operation of the City and Suburban tramways is generated at the power-houses at Ultimo and White Bay, erected at a total cost of £2,176,116, including the cost of the sub-stations and plant. The total output of the power-houses, for both lighting and traction purposes, during the year 1923-24 was 154,447,350 kilowatt-hours, of which the direct-current supply numbered 75,781.

(ii) *Private Tramways.* A private steam tramway passes through the township of Parramatta. Commencing at the park gates, it runs as far as the Duck River, a distance of $3\frac{1}{2}$ miles, where it connects with the Parramatta River steamers which convey passengers and goods to and from Sydney. This line, which has a gauge of 4 ft. 8 $\frac{1}{2}$ in., was opened for traffic in 1883. In 1924 the number of tram-miles run was 18,200, and the number of passengers conveyed 93,157.

3. *Victoria.*—(i) *General.* In Melbourne there are several tramway systems carried on under the control of various authorities, the most important being the cable and electric systems worked by the Melbourne and Metropolitan Tramway Board, to which reference will be made further on. There were also, at 30th June, 1924, two lines of electric tramways, viz.:—(a) St. Kilda to Brighton, and (b) Sandringham to Black Rock, both of which belong to and are operated by the Railway Commissioners. In addition there are systems of electric tramways at Ballarat, Bendigo, and Geelong, constructed and run by private companies.

Numerous tramways have been constructed for special purposes in various parts of the State under the provisions of the Tramway Act 1890. These, however, are of the nature of the private railways referred to in sub-section 1 hereof.

(ii) *Melbourne and Metropolitan Tramways Board.* (a) *General.* A short account of the formation of the Melbourne Tramway and Omnibus Company, and of the Tramway Board, will be found in earlier issues of this work.

(b) *Cable and Horse Tramways.* (1) *Services.* The complete system consists of 45.90 miles of double track of 4 ft. 8 $\frac{1}{2}$ in. gauge connecting the City of Melbourne with the nearer suburbs. The service (horse-drawn) to Royal Park was abandoned in 1923.

(2) *Particulars of Working.* A summary for the years 1920 to 1924 is given hereunder:—

CABLE TRAMWAYS.—MELBOURNE.—SUMMARY, 1920 TO 1924.

Year ended 30th June—	Mileage Open (Route).			Mileage Run during Year.			Number of Passengers Carried.		
	Cable.	Horse.	Total.	Tram.		Total.	Tram.		Total.
				Cable.	Horse.		Cable.	Horse.	
Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	No.	No.	No.	
1920(a) ..	45.90	0.63	46.53	13,424,488	10,648	13,435,136	133,378,390	296,651	133,675,041
1921 ..	45.90	0.63	46.53	14,058,575	10,406	14,068,981	149,755,005	293,676	149,048,681
1922 ..	45.90	0.63	46.53	14,624,684	10,134	14,634,818	150,962,255	239,502	151,201,763
1923 ..	45.90	0.63	46.53	14,832,416	9,808	14,842,224	155,617,351	202,802	155,820,153
1924 ..	45.68	(b)	45.58	14,713,853	3,066	14,716,919	147,750,236	50,220	147,800,606

Year ended 30th June—	Traffic Revenue.			Working Expenses.			Percentage of Working Expenses on Revenue.	No. of Employees at end of Year.
	Tram.		Total.	Tram.		Total.		
	Cable.	Horse.		Cable.	Horse.			
£	£	£	£	£	£	%	No.	
1920(a) ..	1,075,236	606	1,075,842	722,482	1,564	724,046	67.30	2,786
1921 ..	1,146,955	792	1,147,747	843,333	1,100	844,433	73.60	2,836
1922 ..	1,232,415	916	1,233,331	943,415	1,184	944,599	76.59	2,864
1923 ..	1,260,043	869	1,260,912	923,564	1,225	924,789	73.34	3,035
1924 ..	1,190,594	241	1,190,835	990,196	373	990,569	83.18	3,295

(a) Exclusive of Northcote Cable Tramway from 2nd February, 1920, to 30th June, 1920.

(b) Line abandoned from 16th November, 1923.

(c) *Electric Tramways.* (1) *Services Operated.* The system controlled by the Melbourne and Metropolitan Tramway Board at 30th June, 1923, consisted of seven services, viz., (a) The Prahran and Malvern Tramways; (b) The Hawthorn Tramways; (c) The Melbourne, Brunswick and Coburg Tramways; (d) The Fitzroy, Northcote and Preston Tramways; (e) The Footscray Tramways; (f) the North Melbourne—Essendon Tramway; and (g) the Toorak Road—Victoria Street line, all of 4 ft. 8½ in. gauge.

(2) *Particulars of Working.* A summary of operations for the year 1923–24 is given hereunder:—

MELBOURNE TRAMWAY BOARD.—ELECTRIC SERVICES.—OPERATIONS. 1923–24.

Year.	Mileage. (Route.)	Total Cost of Con- struction and Equipment	Current used for Traction Purposes.	Tram Miles Run.	Passengers Carried.	Gross Revenue.	Working Expenses.	Interest.	Net Profit.
	Miles.	£	Kilowatt- hours.	No.	No.	No.	£	£	£
1923–24	72.19	2,409,281	16,900,525	7,267,066	74,091,564	692,220	576,427	85,856	29,937

(3) *Future Development.* A scheme has been submitted to Parliament in connexion with the extension of existing lines, the linking-up of lines already constructed in different suburbs, and the opening up of new routes. The total mileage involved in this scheme is 10.40 miles (route), of which 2.65 miles have been opened for traffic, while 2.73 miles were under construction at 30th June, 1924.

(iii) *Other Government Tramways.* The Victorian Railway Department owns and operates two lines of electric street railways, viz., St. Kilda to Brighton (5.18 miles of 5 ft. 3 in. gauge) and Sandringham to Black Rock (2.41 miles of 4 ft. 8½ in. gauge), a total route mileage of 7.59 miles.

Particulars of the operations of these tramways for the years 1919–20 to 1923–24 are contained in the tables hereunder.

ELECTRIC TRAMWAY.—ST. KILDA—BRIGHTON.—1920 TO 1924.

Year ended 30th June—	Total Cost of Construc- tion and Equipment.	Current used for Traction Purposes.	Tram Miles Run.	Passengers Carried.	Gross Revenue.	Working Expenses	Interest.	Net Profit or Loss.
	£	Kilowatt- hours.	No.	No.	£	£	£	£
1920 ..	150,128	1,381,821	551,307	6,805,892	50,494	42,813	6,005	1,676
1921 ..	153,581	1,487,928	552,772	5,572,454	47,005	63,921	6,143	— 23,059
1922 ..	172,661	1,550,469	538,495	5,488,034	55,372	51,501	6,906	— 3,035
1923 ..	188,423	1,377,116	504,098	5,750,912	54,191	42,598	8,893	2,703
1924 ..	190,501	1,433,904	523,950	5,709,684	54,381	45,497	8,937	— 1,513

(a) Inclusive of cost of Rolling Stock for Sandringham—Black Rock electric street railway.
(—) Indicates loss.

ELECTRIC TRAMWAY.—SANDRINGHAM—BLACK ROCK.—1920 TO 1924.

Year ended 30th June—	Total Cost of Construc- tion.	Current used for Traction Purposes.	Tram Miles Run.	Passengers Carried.	Gross Revenue.	Working Expenses	Interest.	Net Profit or Loss.
	£	Kilowatt- hours.	No.	No.	£	£	£	£
1920 ..	57,910	161,370	113,405	2,433,162	11,597	7,898	2,316	1,383
1921 ..	59,973	172,920	121,575	1,232,796	9,140	8,802	2,399	— 2,061
1922 ..	72,735	231,600	127,348	1,278,571	11,398	9,844	2,909	— 1,355
1923 ..	86,974	245,130	125,274	1,411,885	12,531	9,607	4,783	— 1,859
1924 ..	94,390	301,850	126,436	1,459,239	12,971	12,623	5,148	— 4,700

(—) Indicates loss.

(iv) *Private Tramways.* Two systems of tramways are owned and operated by private companies, viz., Ballarat and Bendigo (21.25 miles) and Geelong (6.44 miles); giving a total route mileage of 27.69 miles. Electrical traction is used on each of these lines which are constructed to the 4 ft. 8½ in. gauge.

(v) *Summary for all Electric Tramways.* The following table gives particulars of the working of all electric tramways in Victoria for each year from 1920 to 1924 inclusive :—

ELECTRIC TRAMWAYS.—VICTORIA.—SUMMARY, 1920 TO 1924.

Year ended 30th June—	Mileage Open for Traffic (Route).	Total Cost of Construction and Equipment.	Current Used for Traction Purposes.	Tram Miles Run.	Passengers Carried.	Gross Revenue.	Working Expenses.	Cars in Use.	Persons Employed.
	Miles.	£	Kilowatt-hours.	No.	No.	£	£	No.	No.
1920	105.26	2,442,746	15,758,101	7,302,713	74,359,826	553,507	418,462	294	1,554
1921	105.26	2,528,665	17,619,387	8,102,393	79,807,665	647,067	539,652	302	1,795
1922	109.50	2,675,023	18,755,105	8,471,039	82,444,219	790,494	585,434	309	1,836
1923	106.79	2,795,547	19,114,007	8,585,756	86,027,005	816,984	624,852	310	2,190
1924	107.47	3,046,443	20,390,335	9,192,499	88,902,067	844,189	709,293	353	2,729

4. *Queensland.*—(i) *General.* The electric tramways in the city and suburbs of Brisbane were controlled by a private company, with head office in London, until the 31st December, 1922, on which date they were purchased by the Queensland Government which, under the provisions of the Brisbane Tramway Trust Act 1922, appointed a Trust to control and operate the system. The total length of the Brisbane tramways was 47.13 route miles at the end of the year 1924. A steam tramway having a length of 6.65 route miles is in operation at Rockhampton.

(ii) *Brisbane Electric Tramways.* These tramways are run on the overhead trolley system, the voltage of the line current being 550. Cost of construction and equipment to the end of the year 1924 was £1,615,282, the gauge of line being 4 ft. 8½ in. The following table gives a summary for the calendar years 1920 to 1924 :—

ELECTRIC TRAMWAYS.—BRISBANE.—SUMMARY, 1920 TO 1924.

Year ended 31st Dec.—	Mileage Open for Traffic (Route).	Total Cost of Construction and Equipment.	Current Used for Traction Purposes.	Tram Miles Run.	Passengers Carried.	Gross Revenue.	Working Expenses.	Cars in Use.	Persons Employed.
	Miles.	£	Kilowatt-hours.	No.	No.	£	£	No.	No.
1920	42.60	1,435,414	11,000,875	4,934,043	69,236,690	527,264	387,456	178	1,130
1921	42.60	1,640,127	11,413,745	4,994,357	68,056,309	544,828	411,180	178	1,142
1922	42.60	1,640,127	12,143,194	5,102,527	71,529,033	575,088	446,472	181	1,179
1923	43.06	1,431,799	11,919,254	5,211,971	74,721,594	628,841	474,202	182	1,301
1924	47.13	1,615,282	12,656,077	5,457,800	78,367,194	663,747	503,131	201	1,731

(a) To 31st December, 1917.

(b) To 31st December, 1921.

(iii) *Rockhampton Municipal Tramway.* This tramway was opened for traffic in 1909, the motive power being steam. The length of line is 6.65 route miles, and the gauge 3 ft. 6 in. The capital cost to 31st December, 1923, was £53,129. During the year 1,756,352 passengers were carried, the revenue being £16,288 and working expenses £15,286. The number of the staff at the end of year was 42.

(iv) *Sugar-Mill Tramways.* In various parts of Queensland there are tramways used in connexion with the sugar-milling industry, chiefly for the purpose of hauling cane. Some of these lines are of a permanent nature, running through sugar-cane plantations, while others are portable lines running to various farms. Particulars of these lines are given in Transport and Communication Bulletin No. 16, but lack of space precludes the publication of such information in this volume.

5. *South Australia.*—(i) *Electric Tramways.* The tramways in Adelaide and suburbs are controlled by a Municipal Tramways Trust created in 1907. Prior to this year, the system was run with horse-traction by several private companies. Electric traction was inaugurated in 1909, and at the 31st July, 1924, the Tramways Trust operated a total route mileage of 73.83 miles of 4 ft. 8½ in. gauge. A summary for the years 1920 to 1924 is given in the subjoined table :—

ELECTRIC TRAMWAYS.—ADELAIDE.—SUMMARY, 1920 TO 1924.

Year ended 31st July—	Mileage Open for Traffic (Route).	Total Cost of Construction and Equipment.	Current Used for Traction Purposes.	Tram Miles Run.	Passengers Carried.	Gross Revenue.	Working Expenses.	Cars in Use.	Persons Employed.
	Miles.	£	Kilowatt-hours.	No.	No.	£	£	No.	No.
1920	66.03	1,793,298	11,261,046	5,407,654	50,815,848	505,303	339,166	190	1,270
1921	66.40	1,890,067	12,096,515	5,785,148	55,323,737	555,421	392,824	190	1,264
1922	69.45	2,190,147	12,542,540	5,960,082	56,787,339	580,505	405,230	198	1,287
1923	71.71	2,512,048	13,700,385	6,155,033	59,618,362	612,839	430,474	218	1,422
1924	73.83	2,742,985	15,705,191	6,568,985	61,737,665	638,277	463,481	231	1,583

(ii) *Horse Tramways.* There are also 19.86 miles of Government horse-tramways in country districts, worked in connexion with the railway system, of which 17.36 miles are used for passenger service, and 2.50 miles for special purposes.

6. *Western Australia.*—(i) *Government Tramways.* (a) *General.* Apart from the electric tramways, there are several Government tramways, with a total length of 25.14 miles. The lines are under the control of the Department of the North-West, and the most important is that between Roebourne and Cossack, constructed on a 2-ft. gauge, with a length of 12.50 miles, and worked by steam. The remaining 12.64 miles are made up of several short lengths worked by steam or horses in connexion with the jetties at certain ports, and providing communication between the jetties and the goods sheds or warehouses.

(b) *Steam and Horse Tramways.* The capital cost of the Government steam or horse tramways up to the 30th June, 1924, was £88,474, the gross revenue for 1923–24 being £6,275, and the working expenses £2,080.

(c) *Perth Electric Tramways.* These tramways were opened for traffic by a private company on the 24th September, 1899, and the system was subsequently extended to many of the suburbs. Control was taken over by the Government on the 1st July, 1913, and the tramways are now worked in conjunction with the Government railways. The gauge of line is 3 ft. 6 in. The following table shows particulars of working for the year ended 30th June, 1924 :—

ELECTRIC TRAMWAYS.—PERTH.—1924.

Mileage.	Total Cost of Construction and Equipment.	Current Used for Traction Purposes.	Tram Miles Run.	Passengers Carried.	Gross Revenue.	Working Expenses.	Cars in Use.	Persons Employed.
	£	Kilowatt-hours.	No.	No.	£	£	No.	No.
34.24	879,277	8,061,920	2,989,089	27,893,315	274,583	231,895	103	529

(ii) *Private Tramways.* Electric tramways with a route mileage at 31st August, 1924, of 8.61 miles, and controlled by the municipal authorities, are in operation in Fremantle. In Kalgoorlie and Boulder a private company controls the electric tramways, and at the end of 1924 the length of line was 14.82 miles (route). All the foregoing lines are of 3 ft. 6 in. gauge.

(iii) *Summary, all Electric Tramways.* The subjoined table gives a summary for all electric tramway systems in the State for the years 1920 to 1924 :—

ELECTRIC TRAMWAYS.—WESTERN AUSTRALIA.—SUMMARY, 1920 TO 1924.

Year.	Mileage Open for Traffic (Route).	Total Cost of Construction and Equipment.	Current Used for Traction Purposes.	Tram Miles Run.	Passengers Carried.	Gross Revenue.	Working Expenses.	Cars in Use.	Persons Employed.
	Miles.	£	Kilowatt-hours.	No.	No.	£	£	No.	No.
1920	50.66	1,175,597	7,724,522	3,612,417	27,322,826	278,117	221,045	136	629
1921	50.90	1,227,304	8,412,175	3,472,632	33,377,124	313,195	276,607	136	728
1922	50.38	1,364,177	8,745,935	3,540,886	32,954,755	338,353	277,971	160	826
1923	53.81	1,442,094	9,326,907	3,637,126	33,838,351	350,412	281,566	166	722
1924	57.67	1,477,033	10,117,198	3,939,689	36,484,855	380,883	301,920	160	702

7. *Tasmania.*—(i) *Electric Tramways.* In Hobart there is a system of electric tramways consisting of 16.50 route miles of 3 ft. 6 in. gauge controlled by the Hobart Municipal Council. The Launceston City Council operates tramways in Launceston having a length of 10.14 route miles of 3 ft. 6 in. gauge.

The following table gives a summary of the working of the two systems for the years 1920 to 1924 :—

ELECTRIC TRAMWAYS.—TASMANIA.—SUMMARY, 1920 TO 1924.

Year.	Mileage Open for Traffic (Route).	Total Cost of Construction and Equipment.	Current Used for Traction Purposes.	Tram Miles Run.	Passengers Carried.	Gross Revenue.	Working Expenses.	Cars in Use.	Persons Employed.
	Miles.	£	Kilowatt-hours.	No.	No.	£	£	No.	No.
1920	23.13	413,060	2,192,420	1,257,911	11,961,256	112,023	83,385	63	362
1921	23.13	443,872	2,610,504	1,428,696	14,766,819	142,500	108,684	67	428
1922	25.64	490,476	2,697,680	1,504,634	15,315,969	155,129	122,622	68	448
1923	26.28	517,983	3,447,310	1,747,974	16,499,999	177,057	132,011	74	438
1924	26.64	541,941	3,439,420	1,890,882	17,683,824	192,772	144,841	82	430

(ii) *Other Tramways.* There are several lines of privately-owned steam tramways. These are dealt with in § 5, Private Railways, as they do not come within the category of street tramways for the conveyance of passengers.

8. *Electric Tramways, Australia.*—(i) *Summary for 1924.* The subjoined table gives details regarding all electric tramways in Australia. The returns for tramways in Hobart, in Ballarat and Bendigo, in Kalgoorlie, and in Brisbane are for the calendar year 1924 ; for other tramways they refer generally to the financial year 1923–24.

ELECTRIC TRAMWAYS.—AUSTRALIA.—SUMMARY, 1923–24.

State.	Mileage open for Traffic (Route).	Cost of Construction and Equipment.	Current used for Traction purposes.	Tram-Miles Run.	Passengers Carried.	Gross Revenue.	Working Expenses.	Percentage of Working Expenses on Gross Revenue.	Cars, Motors and Trailers.	Persons Employed.
	Miles.	£	Kilowatt-hours.	No.	No.	£	£	%	No.	No.
N.S.W. . .	169.50	9,782,825	96,448,720	30,675,479	323,497,709	3,423,407	2,807,636	82.01	1,571	10,608
Victoria . .	107.47	3,046,443	20,390,335	9,192,499	88,902,067	844,189	709,293	84.02	353	2,729
Q'land . . .	47.13	1,615,282	12,656,077	5,457,800	78,367,194	663,747	503,131	75.80	201	1,731
S. Aust. . .	73.83	2,742,985	15,705,191	6,568,985	61,737,665	638,277	463,481	72.61	231	1,583
W. Aust. . .	57.67	1,477,033	10,117,198	3,939,689	36,484,855	360,883	301,920	83.66	160	702
Tasmania	26.64	541,941	3,439,420	1,890,882	17,683,824	192,772	144,841	75.14	82	430
All States	482.24	19,206,509	158,756,941	57,725,334	606,673,314	6,123,275	4,930,302	80.51	2,598	17,783

The percentage of working expenses on gross revenue for all electric tramways in Australia was 80.51, ranging from 72.61 in the case of South Australia to 84.02 in the case of Victoria.

(ii) *Summary for Years 1920 to 1924.* The following table gives particulars of the operations of electric tramways in Australia for the years 1920 to 1924 :—

ELECTRIC TRAMWAYS.—AUSTRALIA.—1920 TO 1924.

Particulars.	1920.	1921.	1922.	1923.(a)	1924.
Mileage open for Traffic (Route) Miles.	443.03	445.10	456.35	460.18	482.24
Total Cost of Construction and Equipment £	15,110,405	15,239,646	16,703,046	17,587,960	19,206,509
Current used for Traction Purposes Kil. hrs.	140,011,914	149,344,836	154,361,664	146,387,481	158,756,941
Tram-miles run No.	47,909,439	50,895,255	52,347,711	53,790,529	57,725,334
Passengers carried „	538,683,129	567,179,017	569,067,250	580,472,975	606,673,314
Gross Revenue £	4,652,962	5,419,369	5,703,337	5,908,303	6,123,275
Working Expenses £	3,696,188	4,378,079	4,538,415	4,675,289	4,930,302
Percentage of Working Expenses on Gross Revenue £	79.44	80.78	78.33	79.13	80.51
Cars, Motors and Trailers No.	2,255	2,287	2,343	2,487	2,593
Persons Employed „	13,385	13,709	14,753	15,101	17,783

(a) Includes Queensland for the year ended 31st December, 1922.

During the five years included in the above table the percentage of working expenses on the gross revenue of all electric tramways in Australia reached a maximum of 80.78 in 1921 and a minimum of 78.33 in 1922, the average over the whole period being 79.90.

D. AIRCRAFT.

1. *General.*—A short review of the progress of civil aviation in Australia up to the date of foundation of the Department of Civil Aviation was given in Official Year-Book No. 16, pp., 334-5, but limitations of space preclude its repetition in the present volume.

2. *Foundation of Civil Aviation Department.*—In December, 1920, the Commonwealth Parliament passed the Air Navigation Act, the objects of which were :—(a) To carry out the provisions of the Convention on Air Navigation, signed in Paris on the 13th October, 1919. (b) To apply the principles of the Convention not only to international flying, but to internal flying in Australia, and generally to legislate by regulation on the subject matter.

Regulations were drawn up under this Act to provide, *inter alia*, for the registration and periodical inspection of aircraft, licensing of aerodromes, examination and licensing of personnel engaged in flying and in upkeep of machines, prohibition of trick flying, rules of the air, etc. Penalties are prescribed for breaches of these regulations.

The date of commencement of the Act was fixed by proclamation as the 28th March, 1921, and the Regulations, issued in the previous month, came into force on the same date.

A Controller of Civil Aviation was appointed on the 16th December, 1920, to administer the Act and Regulations.

3. *Activities of Civil Aviation Department.*—(i) *Aerodromes and Landing Grounds.* Amongst the earliest activities were the acquisition and preparation of civil aviation landing grounds, which have now been established over the following approved routes :—(a) Perth to Derby (1,442 miles); (b) Adelaide to Sydney (790 miles); (c) Sydney to Brisbane (550 miles); (d) Charleville to Camooweal (Queensland), 825 miles; (e) Melbourne to Hay (233 miles); (f) Mildura to Broken Hill (189 miles).

Facilities for landing have also been provided on the route from Melbourne to Charleville, via Cootamundra, Narromine, Bourke, and Cunnamulla; and from Derby to Wyndham, via Fitzroy Crossing, Hall's Creek, and Ord River Downs.

Preliminary surveys of the following routes also have been made, but no expenditure has yet been incurred in the preparation of landing grounds in connexion therewith :— (a) Melbourne to Perth (2,000 miles); (b) Adelaide to Port Lincoln, via Yorke Peninsula (for seaplanes), (200 miles).

The Royal Australian Air Force have surveyed and prepared for use a service route from Camooweal to Port Darwin, via Anthony's Lagoon, Newcastle Waters, and Katherine.

Up to the present 128 landing grounds have been acquired or leased, and prepared for civil aviation purposes.

(ii) *Aerial Services.* (a) *General.* In addition to providing a regular and speedy transport service over fixed routes, it was considered that the granting of contracts for subsidized aerial services would give an impetus to the development of civil aviation in Australia, while the trained flying and ground personnel would provide a technical reserve for air defence in case of war.

At 30th June, 1924, subsidized contractors were operating under contracts which provided that 100 lb. of mail is to be carried free on each trip, the letters for transmission being surcharged 3d. per $\frac{1}{2}$ ounce.

All pilots and mechanics employed on these services must join the Air Force Reserve when the Reserve is constituted.

(b) *Aerial Mail Services.* Up to the present, tenders have been accepted for the following :—

(1) *Perth to Derby—Western Australia.*

This service, covering a distance of 1,442 miles, is carried out by the Western Australian Airways Limited. Landing places for mails are—Perth, Geraldton, Carnarvon, Onslow, Roebourne, Whim Creek, Port Hedland, Broome, and Derby.

The extended service from Perth to Derby, the subsidy for which is at the rate of £30,000 per annum, was inaugurated on the 17th January, 1924, and the machines now fly 2,884 miles each week, leaving Perth on Thursdays, and returning on Tuesdays. With the exception of a serious accident at its inception, this service has been carried on successfully, and the facilities it has provided have been readily availed of by the residents. The number of letters carried during the first month's operations was 577, but it has now increased to about 18,000 per month.

(2) *Charleville to Camooweal—Queensland.*

This service is operated by the Queensland and Northern Territory Aerial Services Limited. The route covers 825 miles, and links up the western terminals of three main railway lines in Western Queensland, viz., Charleville, Longreach, and Cloncurry. The landing places for mails are—Charleville, Tambo, Blackall, Longreach, Winton, McKinlay, Cloncurry, Mt. Isa, and Camooweal.

The original contract provided for a weekly (return) service between Charleville and Cloncurry for 12 months from the 2nd November, 1922, with a subsidy of £12,000. The agreement was renewed for 12 months from the 2nd November, 1923, at the same subsidy, and for a further 12 months from 2nd November, 1924, with provision for the extension, inaugurated on 7th February, 1925, to Camooweal, via Mt. Isa. Consequent on the extension to Camooweal, the subsidy per annum has been increased to £17,000.

The service has been maintained successfully, and is greatly appreciated by residents of Western Queensland and the Northern Territory. Passenger bookings have been extremely heavy, and show an increase of 100 per cent. over the bookings for the previous 12 months.

(3) *Adelaide—Sydney, and Sydney—Brisbane Services.*

Contracts were accepted in 1921 for the maintenance of weekly return aerial services between Adelaide and Sydney, 790 miles, and Sydney and Brisbane, 550 miles, for a period of twelve months, with subsidies of £17,500 and £11,000 respectively.

Owing to various causes, delays occurred in the commencement of the services, and it was not until 2nd June, 1924, that the contractors (Larkin Aircraft Supply Co.) commenced operations, which were confined to the Adelaide—Sydney section.

A number of new four-seater passenger machines were placed in commission in November, 1924, and the service—once weekly in each direction—has since been regularly maintained.

A modification to be introduced shortly will provide a faster service on the section specified, and will include also a service between Melbourne and Broken Hill. The scheme provides for the continuance of the weekly service between Adelaide and Cootamundra, and for additional connecting services from Hay to Melbourne and Mildura to Broken Hill.

(4) *Future Services.*

In addition to the services referred to in the previous issue of the Year Book (No. 17, p. 333), proposals have been submitted to the Department for the operation of the following services :—(a) From Fremantle to Adelaide; (b) From Camooweal to Brunette; and (c) From Melbourne to Launceston.

(iii) *Experimental Work.* The construction of a flying boat designed by Squadron Leader E. J. Wackett, D.F.C., A.F.C., R.A.A.F., is nearing completion, and will be ready for official tests at an early date. This machine, which has been ordered by the Civil Aviation Department, embodies a number of features specially designed for local requirements, and, with the exception of the engine, is being wholly built at the R.A.A.F. workshops.

(iv) *Light Aeroplane Competitions.* The first Australian competitions for light-powered 'planes were held at Richmond Aerodrome in December, 1924, under the auspices of the Australian Aero Club (New South Wales section). Special prizes to the value of £500 were donated by the Commonwealth Government in addition to those given by private individuals.

(v) *Round Australia Flight.* During August, 1924, a flight round Australia was undertaken by the Controller of Civil Aviation and the Director of Civil Flying, for the purpose of—(a) Testing the efficiency of the first DH 50 machine introduced into Australia on long distance cross-country flying in various latitudes; (b) Inspecting departmentally the work carried out in connexion with the establishment of aerodromes and emergency landing grounds between Cloncurry and Camooweal and between Derby and Wyndham; (c) Interviewing the contractors for Charleville-Cloncurry and Perth-Derby services, and seeing those services in operation.

The route followed was from Melbourne to Darwin, via Central Queensland and the Barkly Tableland. The return journey was via Katherine River, head waters of Victoria and Ord Rivers, Wyndham, Hall's Creek, Fitzroy Crossing, Broome, along the coast to Perth, thence via the Trans-Australian railway route to Melbourne.

The whole journey of 8,000 miles was completed in a little over three weeks (actual flying time 90 hours 25 minutes), all of the objectives being successfully accomplished without any untoward incident.

4. *Training of Air Pilots.*—Three civilian cadets have graduated as pilots as the result of their training at No. 1 Station, R.A.A.F., during the year.

These cadets were nominated by the Controller of Civil Aviation, and receive pay whilst undergoing training for a period of about twelve months. Their pay, uniform, cost of training, etc., is borne from Royal Australian Air Force Funds.

Arrangements have now been made to confine the nominations to R.A.A.F. mechanics who are eligible for free discharges on receipt of offers of engagement as pilots with civil companies.

Qualified pilots who are employed or about to be employed in commercial aviation enterprises are accepted on the recommendation of the Controller of Civil Aviation for short refresher courses of flying instruction at the Flying Training School, Point Cook. No charge is made for this refresher instruction, the cost of which is also borne by Royal Australian Air Force Funds.

5. *Statistical Summary.*—The collection and compilation of aircraft statistics were undertaken by the Commonwealth Bureau of Census and Statistics on the 1st July,

1922. The subjoined table gives a summary of operations for the year ended 30th June, 1924 :—

AIRCRAFT.—SUMMARY, YEAR ENDED 30th JUNE, 1924.

Particulars.	State in which Aeroplanes are Located.					Total.
	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	
Companies or persons owning aircraft .. No.	9	8	5	1	3	26
Aeroplanes .. No.	9	20	12	1	9	51
Staff employed(a)—						
Certificated pilots .. No.	4	12	4	1	6	27
Others .. No.	1	24	10	..	22	57
Flights carried out .. No.	930	1,407	996	32	939	4,354
Hours flown ..	314 h. 30m.	446 h. 34 m.	974 h. 58 m.	33 h. 20 m.	1934 h. 05 m.	3,703 h. 27 m.
Approx. mileage .. miles	20,131	30,291	71,664	2,000	145,823	269,909
Passengers carried—						
Paying .. No.	1,064	1,226	532	..	631	3,453
Non-paying .. No.	339	475	17	32	445	1,303
Total .. No.	1,403	1,701	549	32	1,076	4,761
Goods, weight carried lbs.	525	..	1,741	..	6,190	8,456
Mails, letters carried No.	..	..	11,881	..	162,810	174,691
Accidents involving						
Injuries to <i>personnel</i> No.	..	..	1	..	..	1
Damage to aircraft No.	..	2	1	..	3	6
Persons killed .. No.	..	..	..	..	..	..
„ injured .. No.	..	..	1	..	..	1

(a) Monthly average.

6. **Aerial Surveys.**—During September, 1924, the Queensland Mines Department carried out with very satisfactory results an aerial photographic survey of the Mt. Isa silver-lead minefield.

E. MOTOR VEHICLES.

1. **Registration.**—The arrangements for the registration of motor-vehicles and the licensing of drivers and riders thereof are not uniform throughout Australia. Particulars regarding methods of registration, licences, fees payable, etc., in each State were given in Official Year Book No. 16, pp. 337–340, but limits of space preclude the repetition of this information in the present volume. Since the publication of this information certain amendments to legislation governing the registration, etc., of motor vehicles have become operative, the chief of which are as follows :—

(a) *New South Wales.* The Motor Vehicles (Taxation) and Motor Vehicles (Taxation) Management Acts of 1924 prescribe that the amount of tax payable on motor vehicles is to be calculated on a weight basis, the unit being a “half-hundredweight.”

(b) *Victoria.* Under the provisions of the Highways and Vehicles Act 1924, the registration fees payable in respect of motor vehicles are based on “power-weight” units and according to the nature of the tire equipment.

2. **Public Vehicles.**—In all the capital cities of the States and in many of the most important provincial centres taxi-cabs and other vehicles ply for hire under licence granted either by the Commissioner of Police or the Local Government authority concerned. In addition, there is a considerable number of motor-omnibuses operating between the capital cities and their suburbs. As most of these omnibuses are independently controlled by individuals or small companies, it has not been possible to obtain complete data in respect of their operations. Arrangements have, however, been made for the collection of such information in future years.

3. Motor-Vehicles Registered, etc.—Particulars of the registration of motor-vehicles, etc., for the year 1923-24 are contained in the subjoined table:—

MOTOR VEHICLES.—SUMMARY, 1923-24.

State.	Motor Vehicles Registered.				Drivers' and Riders' Licences issued.	Revenue derived from—		
	Motor Cars.	Motor Cycles.	Commercial Vehicles.	Total.		Vehicle Registrations and Motor Tax.	Drivers' and Riders' Licences.	Total.
	No.	No.	No.	No.	No.	£	£	£
New South Wales ..	53,725	16,094	11,874	81,693	122,014	324,336	27,701	352,037
Victoria ..	52,700	17,109	(a)	69,809	78,008	216,008	9,751	225,759
Queensland ..	25,052	4,547	(b) 1,634	31,233	21,587	105,953	7,215	113,168
South Australia ..	27,187	10,210	3,528	40,925	48,363	100,268	10,189	110,457
Western Australia ..	4,616	2,425	1,000	8,041	16,835	25,035	4,209	29,244
Tasmania ..	5,216	2,307	(a)	7,523	9,278	30,088	2,915	33,003
Northern Territory ..	72	25	20	117	92	13	21	34
All States ..	168,568	52,717	18,056	239,341	296,177	801,701	62,001	863,702

(a) Included with motor cars.

(b) Trucks.

4. Comparative Motor Vehicle Statistics, 1923.—The following statement, which has been extracted from the issue of the "Automotive Industries" of 21st February, 1924, shows the number of motor cars and trucks, and motor-cycles in several of the most important countries of the world. The figures are in some instances approximate, being based on estimates supplied by Trade Commissioners or representative motor trade organizations in the various countries.

COMPARATIVE MOTOR VEHICLE STATISTICS, 1923.

Country.	Date.	Motor Cars and Trucks.	Motor Cycles.
Australia	June, 1924 ..	221,285	52,717
Argentina	Jan., 1924 ..	100,000	2,000
Belgium	Nov., 1923 ..	61,300	35,700
Brazil	Jan., 1924 ..	32,000	650
Canada	"	642,571	23,400
Cuba	"	30,000	350
Denmark	"	25,400	16,500
France	"	460,000	84,732
Germany	July, 1923 ..	152,068	59,409
India	Mar., 1923 ..	48,629	15,517
Italy	June, 1923 ..	82,357	50,000
Mexico	Jan., 1924 ..	30,000	500
Netherlands	Oct., 1923 ..	18,489	26,208
New Zealand	Jan., 1924 ..	44,864	12,000
British South Africa	"	40,200	14,000
Spain	June, 1923 ..	60,194	7,000
Sweden	Sept., 1923 ..	36,625	19,296
United Kingdom	Aug., 1923 ..	655,318	430,138
United States of America	Jan., 1924 ..	15,222,658	176,630

The estimated total number of motor-vehicles in 1923, as disclosed by the publication referred to, was 18,241,477 cars and trucks, and 1,079,981 motor-cycles.

The figures quoted for Australia have been compiled from data supplied by the responsible registration authorities in the several States, and differ slightly from those contained in "Automotive Industries."

F. POSTS, TELEGRAPHS AND TELEPHONES.

§ 1. Posts.

1. **The Commonwealth Postal Department.**—In previous issues of the Year Book some account was given of the procedure in connexion with the transfer to the Federal Government of the postal, telegraphic, and telephonic facilities of the separate States. (See Year Book No. 15, p. 601.)

Under the provisions of the Commonwealth Post and Telegraph Act 1901 the Commonwealth Postal Department was placed under the control of a Postmaster-General, a responsible Minister with Cabinet rank, and of a Secretary having chief control of the Department under the Postmaster-General, whilst a principal officer in each State was provided for under the style of Deputy Postmaster-General.

2. **Postal Matter Dealt With.**—(i) *Australia.* The following table gives a summary of the postal matter dealt with in Australia during the five years 1920 to 1924. Although mail matter posted in Australia for delivery therein is necessarily handled at least twice, only the numbers dispatched are included in the table following, which consequently gives the number of distinct articles handled.

POSTAL MATTER DEALT WITH.—AUSTRALIA, 1919-20 TO 1923-24.

Year ended 30th June—	Letters and Post-cards.		Newspapers.		Packets.		Parcels.		Registered Articles.	
	Number (,000 omitted).	Per 1,000 of Population.	Number (,000 omitted).	Per 1,000 of Population.	Number (,000 omitted).	Per 1,000 of Population.	Number (,000 omitted).	Per 1,000 of Population.	Number (,000 omitted).	Per 1,000 of Population.
POSTED WITHIN AUSTRALIA FOR DELIVERY THEREIN.										
1920 ..	526,261	100,297	119,448	22,765	38,140	7,269	5,434	1,036	5,313	1,013
1921 ..	512,021	94,603	117,824	21,770	47,567	8,789	6,633	1,226	5,664	1,046
1922 ..	507,239	91,099	126,165	22,659	56,622	10,169	8,234	1,488	5,516	991
1923 ..	535,596	94,161	136,137	23,931	73,267	12,881	9,158	1,610	5,766	1,014
1924 ..	579,679	99,883	143,429	24,714	93,575	16,124	9,387	1,617	5,950	1,027

OVERSEA RECEIVED.

1920 ..	36,493	6,955	7,799	1,486	2,119	404	339	65	425	81
1921 ..	35,804	6,615	8,931	1,650	2,440	451	371	69	415	77
1922 ..	30,912	5,552	9,770	1,755	2,674	480	339	61	410	74
1923 ..	32,961	5,795	10,271	1,806	2,891	508	437	77	453	79
1924 ..	34,708	5,980	13,662	2,354	4,273	736	447	77	475	82

OVERSEA DISPATCHED.

1920 ..	20,705	3,946	3,838	731	1,495	285	163	31	270	51
1921 ..	21,519	3,976	4,128	763	1,402	259	188	35	305	57
1922 ..	23,822	4,278	4,542	816	1,299	233	176	32	286	51
1923 ..	25,722	4,522	4,734	832	1,671	294	183	32	303	53
1924 ..	29,016	5,000	5,681	979	2,283	393	190	33	341	59

TOTAL POSTAL MATTER DEALT WITH BY THE COMMONWEALTH POSTAL DEPARTMENT.

1920 ..	583,459	111,198	131,085	24,082	41,754	7,958	5,936	1,132	6,008	1,145
1921 ..	569,344	105,194	130,883	24,183	51,409	9,499	7,192	1,330	6,384	1,180
1922 ..	561,973	100,929	140,477	25,230	60,595	10,882	8,799	1,581	6,212	1,116
1923 ..	594,279	104,478	151,145	26,572	77,829	13,683	9,778	1,719	6,522	1,146
1924 ..	643,403	110,863	162,772	28,047	100,131	17,253	10,024	1,727	6,775	1,168

(ii) *States.* The next table shows separately for each State the postal matter dealt with in 1923-24 under the classification adopted in the preceding paragraph, with the exception of registered articles, which are dealt with separately hereinafter. The returns given for South Australia in this and all succeeding tables include those for the Northern Territory, while the returns for the Federal Capital Territory are included in those for New South Wales.

POSTAL MATTER DEALT WITH.—STATES, 1923-24.

State.	Letters and Post-cards.		Newspapers.		Packets.		Parcels.	
	Number (,000 omitted).	Per 1,000 of Population.	Number (,000 omitted).	Per 1,000 of Population.	Number (,000 omitted).	Per 1,000 of Population.	Number (,000 omitted).	Per 1,000 of Population.

POSTED FOR DELIVERY WITHIN AUSTRALIA.

New South Wales	241,125	108,112	63,723	28,571	44,264	19,846	4,243	1,902
Victoria ..	169,737	103,517	35,042	21,371	12,831	7,825	2,007	1,224
Queensland ..	64,335	77,745	23,820	28,785	15,062	18,201	1,701	2,056
South Australia	48,915	91,861	7,959	14,946	13,566	25,476	705	1,323
Western Australia	30,360	84,250	6,151	17,071	5,143	14,271	553	1,535
Tasmania ..	25,207	118,234	6,734	31,584	2,709	12,707	178	836
Australia ..	579,679	99,883	143,429	24,714	93,575	16,124	9,387	1,617

OVERSEA RECEIVED.

New South Wales	11,468	5,142	4,899	2,197	1,314	590	166	74
Victoria ..	16,264	9,919	3,785	2,309	797	486	123	75
Queensland ..	2,147	2,594	2,174	2,628	763	850	78	96
South Australia	1,688	3,170	686	1,288	443	833	32	60
Western Australia	2,232	6,195	1,514	4,202	642	1,783	35	98
Tasmania ..	909	4,265	604	2,832	374	1,753	13	63
Australia ..	34,708	5,980	13,662	2,354	4,273	736	447	77

OVERSEA DISPATCHED.

New South Wales	15,191	6,811	3,178	1,425	1,662	745	87	39
Victoria ..	7,254	4,424	1,413	862	333	203	70	43
Queensland ..	1,990	2,405	456	551	112	135	13	16
South Australia	1,466	2,753	247	463	88	165	8	16
Western Australia	1,604	4,453	232	643	41	113	10	26
Tasmania ..	1,511	7,088	155	727	47	219	2	11
Australia ..	29,016	5,000	5,681	979	2,283	293	190	33

3. Postal Facilities.—(i) *Relation to Area and Population.* The subjoined statement shows the number of post and receiving offices, the area in square miles and the number of inhabitants to each post office (including receiving offices) in each State and in Australia at the end of the year 1923-24. In order to judge clearly the relative postal facilities provided in each State, the area of country to each office, as well as the number of inhabitants per office, should be taken into account.

**POSTAL FACILITIES.—RELATION TO AREA AND POPULATION,
30th JUNE, 1924.**

State.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Australia.
Number of post and receiving offices	2,643	2,672	1,259	805	846	542	8,767
Number of square miles of territory to each office in State ..	117	33	533	1,123	1,154	48	339
Number of inhabitants to each office	844	614	657	661	426	393	662
Number of inhabitants per 100 square miles	719	1,866	123	59	37	813	195

(ii) *Number of Offices.* The following table shows the numbers of post and receiving offices in each year from 1919-20 to 1923-24 inclusive :—

POST AND RECEIVING OFFICES AT 30th JUNE, 1920 TO 1924.

State.	Year ended 30th June—									
	1920.		1921.		1922.		1923.		1924.	
	Post Offices.	Receiving Offices.	Post Offices.	Receiving Offices.	Post Offices.	Receiving Offices.	Post Offices.	Receiving Offices.	Post Offices.	Receiving Offices.
New South Wales ..	2,034	559	2,031	578	2,032	556	2,040	559	2,059	584
Victoria ..	1,707	829	1,712	864	1,721	855	1,736	859	1,774	898
Queensland ..	645	627	658	604	665	576	678	567	694	565
South Australia ..	674	118	670	127	666	139	667	137	669	136
Western Australia ..	402	209	405	222	414	254	426	306	445	401
Tasmania ..	405	83	409	89	413	90	413	106	428	114
Australia ..	5,867	2,425	5,885	2,484	5,911	2,470	5,960	2,534	6,069	2,698

(iii) *Employees and Mail Contractors.* The number of employees and mail contractors in the Central Office and in each of the States is given in the appended table :—

POSTAL EMPLOYEES AND MAIL CONTRACTORS, 1920 TO 1924.

State.	Year ended 30th June—									
	1920.		1921.		1922.		1923.		1924.	
	Employees.	Mail Contractors.	Employees.	Mail Contractors.	Employees.	Mail Contractors.	Employees.	Mail Contractors.	Employees.	Mail Contractors.
Central Office ..	83	..	(a) 139	..	87	..	95	..	100	..
New South Wales ..	11,334	1,912	11,669	2,046	12,451	2,087	13,255	1,732	13,947	1,791
Victoria ..	7,962	1,089	8,117	1,091	8,553	1,096	9,148	1,124	10,279	1,133
Queensland ..	4,778	723	4,728	750	4,792	766	4,978	810	6,220	819
South Australia ..	2,679	427	2,826	439	2,895	441	3,227	422	4,014	354
Western Australia ..	2,110	286	2,111	302	2,200	338	2,450	339	2,450	382
Tasmania ..	1,156	227	1,220	223	1,229	236	1,321	202	1,582	206
Australia ..	30,102	4,664	30,810	4,851	32,207	4,963	34,474	4,629	38,592	4,685

(a) Includes "radio staff."

4. Registered Letters Packets, &c.—Particulars regarding registered articles for the year 1923–24 are given in the table hereunder :—

REGISTERED ARTICLES POSTED AND RECEIVED, 1923–24.

State.	Posted in each State for Delivery within Australia.		Posted in each State for Delivery Overseas.		Total Posted.		Received in each State from Overseas.	
	Number (,000 omitted).	Per 1,000 of Population.	Number (,000 omitted).	Per 1,000 of Population.	Number (,000 omitted).	Per 1,000 of Population.	Number (,000 omitted).	Per 1,000 of Population.
New South Wales ..	2,173	974	153	69	2,326	1,043	205	92
Victoria ..	1,689	1,030	92	56	1,781	1,086	131	80
Queensland ..	876	1,059	39	47	915	1,106	42	51
South Australia ..	506	949	23	44	529	993	32	60
Western Australia ..	458	1,271	29	81	487	1,352	53	147
Tasmania ..	257	1,203	5	23	262	1,226	12	57
Australia ..	5,959	1,027	341	59	6,300	1,086	475	82

5. Value-Payable Parcel and Letter Post.—(i) *General.* The Postal Department undertakes to deliver registered articles sent by parcel post within Australia, or between Papua or Nauru and Australia, to recover from the addressee on delivery a specified sum of money fixed by the sender, and to remit the sum to the sender by money order, for which the usual commission is charged. The object of the system is to meet the requirements of persons who wish to pay at the time of receipt for articles sent to them, and also to meet the requirements of traders and others who do not wish their goods to be delivered except on payment.

(ii) *Summary of Business.* The next statement gives particulars regarding the value-payable post in each State for the years 1920 to 1924 :—

VALUE-PAYABLE PARCELS POST.—SUMMARY, 1920 TO 1924.

Year ended 30th June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
NUMBER OF PARCELS POSTED.							
1920	No. 38,713	No. 2,134	No. 94,733	No. 666	No. 29,628	No. 76	No. 165,950
1921	53,829	3,192	120,045	689	36,125	155	214,035
1922	93,621	4,092	171,848	606	48,187	111	318,465
1923	134,703	5,329	207,162	1,604	56,572	113	405,483
1924	165,360	6,421	225,040	2,456	63,393	292	462,962
VALUE COLLECTED.							
1920	£ 85,055	£ 3,804	£ 137,976	£ 2,555	£ 46,964	£ 336	£ 276,690
1921	124,502	6,105	177,662	2,027	57,170	711	368,177
1922	172,258	8,086	238,047	1,694	81,370	444	501,899
1923	237,209	10,826	279,508	2,485	87,508	439	617,975
1924	277,037	11,310	364,965	3,406	101,515	715	758,998

VALUE-PAYABLE PARCELS POST.—SUMMARY, 1920 TO 1924—*continued.*

Year ended 30th June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
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REVENUE, INCLUDING POSTAGE, COMMISSION ON VALUE, REGISTRATION AND MONEY ORDER COMMISSION.

	£	£	£	£	£	£	£
1920	5,435	331	13,076	106	4,000	15	22,963
1921	8,502	446	16,102	103	4,966	32	30,151
1922	12,144	549	22,214	177	6,259	47	41,390
1923	18,586	667	29,602	248	7,365	52	56,520
1924	23,026	855	30,318	263	8,277	42	62,781

The number of parcels forwarded in Queensland is greatly in excess of the transactions of any other State, chiefly owing to the fact that the system had been established in that State for some years prior to its extension to the whole Commonwealth with the advent of Federal control of the post office. The system has also found favour for several years in Western Australia and New South Wales, and while the amount of business transacted in Victoria, South Australia, and Tasmania is comparatively light, there is evidence of progress.

The average value collected in each of the States for the year 1923–24 was New South Wales £1 13s. 6d., Victoria £1 15s. 1d., Queensland £1 12s. 5d., South Australia, £1 7s. 9d., Western Australia £1 12s., Tasmania £2 9s., and for Australia £1 12s. 9d.

6. *Sea-borne Mail Services.*—(i) *Summary.* In previous issues of this work statements regarding the development of the principal sea-borne mail services were included, but owing to the restrictions of space this information cannot be repeated. The following tabular summary, however, contains information in respect of sea-borne mail services as at 1st April, 1925:—

SUMMARY OF AUSTRALIAN SEA-BORNE MAIL SERVICES, 1925.

Description of Service.	Frequency of Service.	Ports between which Service is maintained.	Particulars regarding Subsidies.
1. <i>To and from Ports in New South Wales—</i>			
(i) <i>NORTHERN PORTS—</i>			
(a) North Coast S.N. Co.	Once weekly	Sydney and Clarence River, Byron Bay, and Richmond River	Poundage rates
(b) " "	Fortnightly	Sydney and South Solitary Island	" "
(ii) <i>SOUTH COAST PORTS—</i>			
Illawarra and S. Coast S.N. Co.	Fortnightly	Sydney, Montague Island	" "
2. <i>To and from Northern Ports of Queensland—</i>			
(a) Hayles Magnetic Island Limited	Weekly	From Cairns to Cooktown via Port Douglas	Subsidized from 6th Dec., 1924, for three years. Amount of subsidy, £2,678 per annum
(b) John Burke and Sons ..	Ten trips a year	Brisbane, Townsville, Cairns, Cooktown, Thursday Island, Normanston and Burketown	Subsidized from 18th November, 1921. Amount of subsidy, £2,000 per annum
(c) Other steamers ..	Irregularly	Various	Poundage rates

SUMMARY OF AUSTRALIAN SEA-BORNE MAIL SERVICES—*continued.*

Description of Service.	Frequency of Service.	Ports between which Service is maintained.	Particulars regarding Subsidies.
3. To and from Ports in South Australia—			
(a) Coast Steamship Co. Ltd.	Weekly	Port Adelaide and Kingscote	Subsidized to 31st December, 1925. Amount of subsidy, (a) £900; (b) £400; (c) £500; (d) £400
(b) " "	Twice a week	Port Adelaide and Edithburgh	
(c) " "	"	Port Adelaide and Stansbury	
(d) " "	"	Port Adelaide and Port Vincent	
(e) Adelaide Steamship Co. . .	Weekly	Port Adelaide and Port Lincoln	Subsidized for three years from 1st January, 1923. Amount of subsidy, £3,000
(f) Adelaide Steam Tug Co. . .	As required	Port Pirie and Whyalla	Subsidized without agreement. Amount of subsidy, £120
(g) Coast Steamships Ltd. . .	Fortnightly	Port Adelaide to Streaky Bay	Poundage Rates
(h) " " " " . .	Weekly (Thursdays)	Port Adelaide to Kingscote	" "
(i) McIlwraith, McEachern Line	Monthly . .	Port Adelaide to Albany	" "
4. Western Australia—			
(i) TO AND FROM PORTS ON N.W. COAST—			
(a) State Steamship Service	Monthly . .	Fremantle and Derby . .	Subsidized by agreement dated 28th February, 1913, for three years. Later extended to a date three months after expiration of war. Subsequently extended for indefinite period. Amount of subsidy, \$5,500
(b) " " " "	Once each sixty days	Fremantle and Darwin	
(c) West Australian S.N. Co.	About fortnightly	Fremantle and Singapore, via N.W. Ports	
(d) Aus'n. United S. Navigation Co., State S.S. Co. and Melbourne S.S. Coy.	Irregularly, during the cattle season	Fremantle, Derby, and Wyndham	
(ii) TO AND FROM PORTS ON S. COAST—			
(a) State Steamship Service	Fortnightly	Albany and Esperance . .	Subsidized by agreement for three years, dating from 1st July, 1921. Amount of subsidy, £1,500
(b) " " " "	Quarterly	Albany and Eucla, via intermediate ports	
5. Tasmania—			
(a) Tasmanian Steamers Pty. Ltd.	Three times a week summer; twice a week winter	Melbourne and Launceston	Subsidy, £30,000 per annum from 1st May, 1921, under contract for twelve months, and thereafter terminable on twelve months' notice by either party to the agreement
(b) " " " "	Twice a week	Melbourne and Burnie	
(c) Union S.S. Co. and Huddart Parker Ltd.	Weekly	Sydney, Hobart, and Wellington	Poundage rates
(d) Union Steamship Co. . .	"	Sydney, Launceston, and Devonport	" "
(e) Shipping and Trading Agency Pty. Ltd.	"	Launceston	" "
(f) " " " "	"	" " " "	" "
(g) Huon Channel "and Peninsular Co.	Thrice a week	Melbourne, Burnie, etc. Hobart and Kelly's Point, via Pearson's Point	Subsidized by agreement dated 1st January, 1925, for three years. Amount of subsidy, £50 per annum
(h) The Commissioner, Tasmanian Government Railways	Every two weeks	Launceston and Furneaux group of islands	Subsidized by agreement dated 1st January, 1925, for three years. Amount of subsidy, £375 per annum
(i) " " " "	Fortnightly	Launceston and Currie, King Island	Subsidized by agreement dated 1st January, 1925, for three years. Amount of subsidy, £400 per annum
(j) Holyman Bros. Pty. Ltd.	Weekly . .	Burnie and Melbourne via Fraser River and King Island	Poundage rates

SUMMARY OF AUSTRALIAN SEA-BORNE MAIL SERVICES—*continued.*

Description of Service.	Frequency of Service.	Ports between which Service is maintained.	Particulars regarding Subsidies.
6. <i>To and from Northern Territory—</i> (a) Burns, Philp and Co. ..	Monthly ..	To and from Adelaide, Melbourne, and Sydney, via Queensland ports	Poundage rates
(b) State Steamship Service of Western Australia	Once each sixty days	Fremantle and Darwin	See Item 4 (b)
7. <i>To and from New Zealand—</i> (a) Conjointly by Union S.S. Co. and Huddart, Parker Ltd.	Weekly	Sydney and Wellington, Sydney and Auckland	Poundage rates
(b) Other steamers ..	Irregularly, when convenient	Sydney, Wellington, Auckland, Lyttelton, and other Ports	" "
(c) " " ..	About every three weeks	Melbourne, Wellington, or Bluff	" "
8. <i>Pacific Islands—</i> (a) Burns, Philp and Co. ..	Every five weeks	Sydney to Lord Howe and Norfolk Islands and New Hebrides	Subsidized by Commonwealth Government
(b) " " ..	Irregularly	Sydney to Nauru and Ocean Islands, Gilbert and Ellice Groups	" "
(c) " " ..	"	Sydney to Marshall Islands	" "
(d) " " ..	Monthly	Sydney to Papua, via Queensland Ports	" "
(e) " " ..	Every three weeks	Sydney to Rabaul, via Brisbane	" "
(f) " " ..	Twice in six weeks	Sydney to Solomon Islands, via Queensland Ports	" "
9. <i>New Caledonia and New Hebrides—</i> (a) Messageries Maritimes ..	Monthly	Sydney and Noumea and to Vila (New Hebrides)	Postal Union rates
(b) Other steamers ..	About twice a month	Sydney and Noumea ..	Poundage rates
10. <i>Fiji, Friendly Islands, and Samoa—</i> (a) Union S.S. Co. ..	Every four weeks	Sydney and Suva ..	" "
(b) " " ..	"	Sydney, Suva, Tonga, and Samoa	" "
(c) A.U.S.N. Co. ..	"	Sydney and Suva ..	" "
11. <i>To Eastern Ports—</i> (a) Burns, Philp and Co. ..	Monthly	Melbourne and Sydney to Java and Singapore, via Queensland Ports and Darwin	Subsidized by Commonwealth Govt. Mails at poundage rates
(b) China Navigation, Eastern and Ausn. Line	About once a month	Melbourne and Sydney to Hong Kong, Manila, etc., via Queensland Ports	Poundage rates
(c) Nippon Yusen Kaisha ..	Every four weeks	Melbourne and Sydney to Manila, China, and Japan, via Queensland Ports	Postal Union rates
(d) Royal Dutch Packet S.N. Co.	Monthly	Melbourne to Java and Singapore, via Sydney and Queensland Ports	Poundage rates
(e) Various other steamers	About monthly	Sydney or Newcastle and ports in Borneo, Java, Sumatra, and Malay Peninsula	" "
(f) W.A.S.N. Co. ..	About fortnightly	W.A. Ports, Java, and Singapore	" "
(g) Austral East Indies line of steamers	Monthly	Sydney, Melbourne, Adelaide, Fremantle, Java, and Singapore	" "
(h) Ellerman Bucknall line..	"	" " "	" "
12. <i>South Africa—</i> White Star, P. and O. Branch Service, and other Companies	Irregularly	Sydney, Melbourne, Adelaide, and Fremantle to Durban and Capetown	" "

SUMMARY OF AUSTRALIAN SEA-BORNE MAIL SERVICES—*continued.*

Description of Service.	Frequency of Service.	Ports between which Service is maintained.	Particulars regarding Subsidies.
13. <i>To and from Europe, via Suez—</i> (a) Orient Steam Navigation Co.	Every four weeks	Brisbane, Sydney, Melbourne, Adelaide, Fremantle, and London, via Suez	Subsidy, £130,000. Commenced 20th September, 1921. Terminable on twelve months' notice by either party
(b) Peninsular and Oriental S.N. Co. Ltd.	Every four weeks	Sydney, Melbourne, Adelaide, Fremantle, and London, via Suez	Postal Union rates
(c) Commonwealth Government Line of Steamers	About every four weeks	" " "	Poundage rates
14. <i>To and from Europe, via Vancouver—</i> (a) Canadian-Australian Line	Every four weeks	Sydney and Vancouver, B.C., via Auckland, Fiji, Honolulu	" "
15. <i>To and from Europe, via San Francisco—</i> (a) Union Steamship Company	Every four weeks	Sydney, Wellington, Raratonga, Tahiti, and San Francisco	Subsidized by New Zealand Govt. Mails from Aust. at Postal Union rates
(b) Oceanic Steamship Co. ..	Every three weeks	Sydney, Pago Pago (Samoa), Honolulu, and San Francisco	Poundage rates
16. <i>North America—</i> (a) Various steamers ..	Irregularly	Sydney or Newcastle to San Francisco	" "
(b) " " ..	"	Sydney to Guaymas (Mexico)	" "
(c) Union S.S. Co. ..	Every four weeks	Sydney, Wellington, Tahiti, and San Francisco	" "
(d) " " ..	"	Sydney, Auckland, Fiji, Honolulu, and Vancouver	" "
(e) Oceanic S.S. Co. ..	Every three weeks	Sydney, Pago Pago (Samoa), Honolulu, and San Francisco	" "
17. <i>South America—</i> (a) { Oceanic S.S. Co. } { Union S.S. Co. }	Thrice a month	Sydney, via San Francisco to ports in Chile, Brazil, Peru, Uruguay, and Argentine	" "
(b) Various other steamers	Irregularly	Via Newcastle and Sydney to various ports	" "

(a) Carries also mails to Canada and United States.

(ii) *Average and Fastest Time of Mails to and from London. (a) Via Suez Canal.*

The subjoined table shows the average and the fastest times occupied in the conveyance of mails from London to Fremantle and vice versa during the year 1923–24 :—

AVERAGE AND FASTEST TIME.—MAILS VIA SUEZ CANAL, LONDON TO FREMANTLE, AND VICE VERSA DURING 1923–24.

Period.	London to Fremantle.		Fremantle to London.	
	Average Time.	Fastest Time.	Average Time.	Fastest Time.
	Days. Hours.	Days. Hours.	Days. Hours.	Days. Hours.
19.10.23 to 30.12.23 ..	25 23	25 12	26 21	25 18½
1.1.24 to 9.3.25 ..	26 1½	25 11¼	26 13	26 —

(b) *Via America.* The average and fastest times occupied in the conveyance of mails between London and Sydney via America during 1923-24 were :—

AVERAGE AND FASTEST TIME.—MAILS VIA AMERICA, DURING 1923-24.

Service.	Average Time.		Fastest Time.	
	Days.	Hours.	Days.	Hours.
London to Sydney { via Vancouver	38	—	38	—
{ via San Francisco (Oceanic)	34	—	36	—
Sydney to London { via Vancouver	36	18	35	—
{ via San Francisco (Oceanic)	36	4½	34	—

(iii) *Amount of Mail Subsidies Paid.* The following table shows the amounts of subsidies paid by the Commonwealth Postal Department for ocean and coastal mail services during the year ended 30th June, 1924 :—

MAIL SUBSIDIES.—OCEAN AND COASTAL SERVICES, 1923-24.

Service.	Orient S. N. Co.	Queens- land Ports.	South Australian Ports.	Western Australian Ports.	Tas- manian Ports.
	£	£	£	£	£
Annual subsidy	130,000	20,537	5,320	6,484	30,750

During the year 1923-24 the amount paid for conveyance of mails at poundage rates by non-contract vessels was £34,974 ; by road services, £624,662 ; and by railway services, £336,408. The total expenditure in 1924 on the carriage of mails, as disclosed by the Profit and Loss Account, amounted to £1,184,831.

7. *Transactions of the Dead Letter Offices.*—The following table shows the number of letters, postcards and letter-cards, and packets and circulars, including Inland, Inter-State, and International, dealt with by the Dead Letter Offices in 1923-24, and the methods adopted in the disposal thereof :—

DEAD LETTER OFFICES—SUMMARY, 1923-24.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
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LETTERS, POSTCARDS, AND LETTERCARDS.

Returned direct to writers or delivered	691,569	374,003	221,622	87,212	145,240	54,658	1,574,804
Destroyed in accordance with Act	100,070	58,718	24,668	13,430	11,238	6,426	214,550
Returned to other States or Countries as unclaimed	114,832	67,866	45,371	22,853	26,680	12,576	290,178
Total	906,471	500,587	291,661	123,495	183,158	73,660	2,079,032

PACKETS AND CIRCULARS.

Returned direct to writers or delivered	805,434	205,134	168,156	61,626	80,452	17,043	1,337,845
Destroyed in accordance with Act	174,800	151,797	4,153	57,045	330	129	388,254
Returned to other States or Countries as unclaimed	17,217	51,338	49,387	16,882	8,975	17,498	161,297
Total	997,451	408,269	221,696	135,553	89,757	34,670	1,887,396
Grand total (letters, packets, etc.)	1,903,922	908,856	513,357	259,048	272,915	108,330	3,966,428

During the year 1923-24 money and valuables to the amount of £155,100 were found in undeliverable postal articles, while 21,030 postal articles were posted without address, including 423 which contained money and valuables to the extent of £2,940.

8. **Money Orders and Postal Notes.**—(i) *General.* The issue of money orders and postal notes is regulated by sections 74 to 79 of the Post and Telegraph Act 1901. A money order may be issued for payment of sums up to £20 within Australia, and not exceeding £40 (in some cases £20, and in Mauritius £10) in places abroad. A postal note, which is payable only within Australia and in Papua, cannot be issued for a larger sum than twenty shillings.

(ii) *Summary for States, 1923-24.* Particulars regarding the business transacted in each State for the year 1923-24 are given hereunder :—

MONEY ORDERS AND POSTAL NOTES.—SUMMARY, 1923-24.

State.	Value of Money Orders Issued.	Value of Money Orders Paid.	Net Money Order Commission Received.	Value of Postal Notes Sold.	Poundage Received on Postal Notes.
	£	£	£	£	£
New South Wales ..	6,321,488	6,463,402	42,145	1,791,306	35,011
Victoria ..	2,962,676	3,054,631	20,110	1,388,015	27,034
Queensland ..	2,268,160	1,930,259	15,118	473,141	9,356
South Australia ..	932,603	818,674	6,413	301,119	6,133
Western Australia ..	1,332,563	1,155,350	9,046	265,203	5,107
Tasmania ..	559,953	490,744	3,658	131,578	2,667
Australia ..	14,377,443	13,913,060	96,490	4,350,362	85,308

The figures in the foregoing table show a general increase over the corresponding particulars for the year 1922-23.

(iii) *Summary, Australia, 1920 to 1924.* The next table shows the total number and value of money orders and postal notes issued and paid in Australia from 1919-20 to 1923-24 :—

MONEY ORDERS AND POSTAL NOTES.—SUMMARY, AUSTRALIA, 1919-20 TO 1923-24.

Year ended 30th June.	Money Orders.				Postal Notes.			
	Issued.		Paid.		Issued.		Paid.	
	Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.
	No. (,000).	£ (,000).	No. (,000).	£ (,000).	No. (,000).	£ (,000).	No. (,000).	£ (,000).
1920 ..	2,352	12,382	2,258	12,094	10,163	3,389	10,127	3,409
1921 ..	2,543	13,675	2,439	13,181	10,849	3,674	10,821	3,671
1922 ..	2,761	13,803	2,632	13,412	11,631	3,968	11,522	3,909
1923 ..	2,873	14,121	2,724	13,706	12,512	4,160	12,455	4,148
1924 ..	2,832	14,377	2,686	13,913	13,382	4,350	13,240	4,311

(iv) *Classification of Money Orders Issued and Paid.* (a) *Orders Issued.* The next table shows the number and value of money orders issued in each State during the year 1923-24, classified according to the country where payable :—

MONEY ORDERS ISSUED.—COUNTRY WHERE PAYABLE, 1923-24.

State in which Issued.	Where Payable.				Total.
	In Australia.	In New Zealand.	In the United K'dom.	In Other Countries.	
NUMBER.					
New South Wales ..	1,170,845	11,761	77,449	14,299	1,274,354
Victoria ..	505,392	6,635	54,945	11,957	578,929
Queensland ..	393,676	1,795	28,041	9,281	432,793
South Australia ..	154,701	980	17,119	5,821	178,621
Western Australia ..	221,235	1,047	21,715	4,057	248,054
Tasmania ..	110,668	1,562	5,778	1,319	119,327
Australia ..	2,556,517	23,780	205,047	46,734	2,832,078

VALUE.					
	£	£	£	£	£
New South Wales ..	5,953,446	50,555	240,773	76,714	6,321,488
Victoria ..	2,702,665	30,679	165,585	63,747	2,962,676
Queensland ..	2,098,098	7,594	84,720	77,748	2,268,160
South Australia ..	839,627	4,269	50,811	37,896	932,603
Western Australia ..	1,238,564	4,547	67,259	22,193	1,332,563
Tasmania ..	534,054	7,428	14,939	3,532	559,953
Australia ..	13,366,454	105,072	624,087	281,830	14,377,443

(b) *Orders Paid.* The number and value of money orders paid in each State during the year 1923-24, classified according to the country where issued are given hereunder :—

MONEY ORDERS PAID.—COUNTRY OF ISSUE, 1923-24.

State in which Paid.	Where Issued.				Total.
	In Australia.	In New Zealand.	In the United K'dom.	In Other Countries.	
NUMBER.					
New South Wales ..	1,183,506	38,655	17,304	10,137	1,249,602
Victoria ..	549,446	19,623	10,875	5,162	585,106
Queensland ..	359,972	2,843	5,327	2,766	370,908
South Australia ..	161,172	1,314	3,094	954	166,534
Western Australia ..	202,618	1,925	5,130	1,242	210,915
Tasmania ..	96,618	3,047	1,454	1,644	102,763
Australia ..	2,553,332	67,407	43,184	21,905	2,685,828

VALUE.					
	£	£	£	£	£
New South Wales ..	6,172,029	163,065	84,601	43,707	6,463,402
Victoria ..	2,909,781	73,710	51,134	20,006	3,054,631
Queensland ..	1,881,277	14,040	25,162	9,780	1,930,259
South Australia ..	795,802	6,143	12,781	3,948	818,674
Western Australia ..	1,118,430	6,170	25,240	5,510	1,155,350
Tasmania ..	469,679	12,423	4,716	3,926	490,744
Australia ..	13,346,998	275,551	203,634	86,877	13,913,060

In the tables above money orders payable or issued in foreign countries which have been sent from or to Australia through the General Post Office at London are included in those payable or issued in the United Kingdom.

(v) *Classification of Postal Notes Paid.* The subjoined table shows the number and value of postal notes paid during the year 1923-24, classified according to the State in which they were issued.

Particulars regarding the total number and value of postal notes issued and paid in each of the last five years have been given previously.

POSTAL NOTES PAID.—STATE OF ISSUE, 1923-24.

Particulars.	Postal Notes Paid in—						
	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
NUMBER.							
Issued in same State ..	3,632,016	2,618,976	1,187,384	623,165	611,163	301,053	8,973,757
Issued in other States ..	444,437	363,350	772,122	55,812	29,760	2,600,532	4,266,013
Total ..	4,076,453	2,982,326	1,959,506	678,977	640,923	2,901,585	13,239,770
VALUE.							
Issued in same State ..	£ 1,383,017	£ 930,079	£ 394,005	£ 206,196	£ 227,239	£ 95,330	£ 3,235,866
Issued in other States ..	163,216	135,889	174,351	22,664	12,170	566,794	1,075,084
Total ..	1,546,233	1,065,968	568,356	228,860	239,409	662,124	4,310,950

The number and value of postal notes paid in Australia during the year showed an increase of 6.30 and 3.93 per cent. respectively over the corresponding figures for the year 1922-23.

9. **Gross Revenue, Postmaster-General's Department.**—(i) *Total.* The following table shows the gross revenue of the Postmaster-General's Department for the years ended 30th June, 1920 to 1924 inclusive. In the postal branch is included the revenue derived from money-order commissions, poundage on postal notes, private boxes and bags, and miscellaneous sources. The figures are supplied by the Treasury, and represent the actual collections and payments for the periods mentioned :—

GROSS REVENUE, POSTMASTER-GENERAL'S DEPT., 1920 TO 1924.

Year ended 30th June—				Postal Branch.	Telegraph Branch.	Telephone Branch.	Total.
				£	£	£	£
1920	..	..	..	3,310,778	1,274,527	2,159,450	6,744,755
1921	..	..	..	4,574,618	(a)1,381,974	2,431,981	8,388,573
1922	..	..	..	5,194,523	(b)1,401,583	2,724,554	9,320,660
1923	..	..	..	5,395,829	(c)1,413,375	2,983,069	9,792,273
1924	..	..	..	5,024,816	(d)1,430,554	3,301,651	9,757,021

Includes radio receipts (a) £12,052, (b) £25,008, (c) £7,711, and (d) £4,012.

As compared with the corresponding figures for the previous year, a decrease of 0.36 per cent. is shown. The figures for the Telegraph and Telephone Branches increased by 1.22 and 10.70 per cent. respectively, while the Postal Branch showed a decrease of 6.88 per cent., due to the reduction in the postal rates on 1st October, 1923.

(ii) *Analysis for States.* Returns for the year ended 30th June, 1924, are given below :—

GROSS REVENUE, POSTMASTER-GENERAL'S DEPT., ANALYSIS, 1923-24.

Particulars.	Central Office.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
	£	£	£	£	£	£	£	£
Postage ..	..	1,702,988	1,256,509	639,482	367,069	251,823	144,789	4,362,660
Telegraphs (ordinary) ..	..	503,714	311,621	231,602	210,967	116,977	51,661	1,426,542
Telegraphs (radio) ..	4,012	..	..	..	..	..	..	4,012
Telephones ..	..	1,286,456	943,595	455,320	342,174	178,912	95,194	3,301,651
Money order commission ..	..	76,708	46,454	25,118	12,734	14,153	6,496	181,663
Poundage on postal notes	..	..	..	..	..	..	..	..
Private boxes and bags ..	..	17,203	9,778	9,644	6,130	3,324	2,053	48,132
Miscellaneous ..	..	165,922	118,269	58,922	30,736	43,510	15,002	432,361
Total	4,012	3,752,991	2,686,226	1,420,088	969,810	608,699	315,195	9,757,012

Increased revenue from Telephones (£318,582) over the amount for 1922-23 was neutralized by the decrease of £371,013 in the revenue of the Postal Branch.

10. Expenditure, Postmaster-General's Department.—(i) *Total*. The next table gives the actual payments made as shown by records kept for Treasury purposes in respect of the Postal Department for each of the years ended 30th June, 1920 to 1924 inclusive.

EXPENDITURE, POSTMASTER-GENERAL'S DEPT., 1920 TO 1924.

Expenditure.	Year ended 30th June—				
	1920.	1921.	1922.	1923.	1924.
	£	£	£	£	£
Total	6,649,432	8,268,725	10,026,593	10,752,373	13,487,891

(ii) *Distribution*. The following table shows, as far as possible, the distribution of expenditure on various items in each State during the year ended 30th June, 1924. The table must not be regarded as a statement of the working expenses of the Department, since items relating to new works, interest, etc., are included therein.

EXPENDITURE, POSTMASTER-GENERAL'S DEPT.—DISTRIBUTION, 1923-24.

Particulars.	Central Office.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
	£	£	£	£	£	£	£	£
Salaries and contingencies—								
Salaries ..	35,651	1,956,101	1,270,996	701,565	455,035	384,001	172,155	4,975,504
Conveyance of mails ..	..	427,255	220,780	220,333	81,224	76,631	39,493	1,065,716
Contingencies ..	4,826	655,738	427,111	400,717	193,712	123,667	87,844	1,893,615
Cables ..	..	2,136	..	..	..	..	..	2,136
Ocean mails ..	130,000	..	..	..	..	..	..	130,000
Miscellaneous ..	6,208	22,060	17,607	5,464	5,903	2,042	3,513	62,797
Pensions and retiring allowances ..	..	37,361	46,840	198	..	8,037	..	92,436
Rent, repairs, maintenance ..	347	55,811	32,928	20,133	12,382	11,370	3,696	136,667
Supervision of works ..	..	548	403	201	131	88	54	1,425
Proportion of Audit Office expenses ..	..	4,102	3,014	1,504	980	656	407	10,663
Unforeseen expenditure ..	..	17	15	21	10	22	1	86
New works—								
Telegraph and telephone ..	1,573	1,397,761	918,824	620,289	430,998	262,999	95,290	3,727,734
New buildings, etc. ..	..	146,322	98,197	42,188	60,854	64,537	12,064	424,162
Interest on transferred properties ..	..	79,047	43,194	31,901	18,623	17,938	8,315	199,018
Other ..	765,932	..	..	..	..	..	..	765,932
Total ..	946,673	4,782,123	3,079,009	2,044,514	1,259,852	951,988	422,832	13,487,891

(a) Particulars of apportionment to each State not available.

Compared with the total for the preceding year the expenditure for 1923-24 rose by £2,735,518, or 25.44 per cent., the principal increase being in respect of new telegraph and telephone works, £1,554,000.

11. Balance Sheet of the Postmaster-General's Department.—(i) *General.* Returns for the last five years are given below :—

PROFITS, POSTMASTER-GENERAL'S DEPT., 1920 TO 1924.

Items.	Year ended 30th June—				
	1920.	1921.	1922.	1923.	1924.
	£	£	£	£	£
Total earnings	6,732,096	8,511,494	9,347,656	9,898,158	9,724,801
Total working expenses ..	5,633,752	6,724,543	7,103,536	7,651,864	8,448,777
Surplus	1,098,344	1,786,951	2,244,120	2,246,294	1,276,024
Interest on capital	610,390	643,183	703,039	780,235	911,672
Total surplus	487,954	1,143,768	1,541,081	1,466,059	364,352

As the table shows, the year 1923-24, after providing for depreciation, pensions and retiring allowances, closed with a surplus of £1,276,024. From this amount, £911,672 interest on capital was deducted, leaving a profit of £364,352, or £1,101,707 less than that of 1922-23.

(ii) *Results for each State.* The next table gives the results for each State during the five years 1919-20 to 1923-24 :—

PROFIT OR LOSS, POSTMASTER-GENERAL'S DEPT., STATES, 1920 TO 1924.

State.	Year ended 30th June—				
	1920.	1921.	1922.	1923.	1924.
	£	£	£	£	£
New South Wales ..	(+) 95,285	(+) 334,395	(+) 508,474	(+) 487,835	(+) 90,815
Victoria	(+) 259,507	(+) 516,860	(+) 644,824	(+) 608,203	(+) 311,709
Queensland	(+) 61,311	(+) 143,844	(+) 186,185	(+) 168,172	(-) 7,734
South Australia ..	(+) 151,984	(+) 189,936	(+) 218,528	(+) 226,155	(+) 106,306
Western Australia ..	(-) 81,391	(-) 62,397	(-) 30,764	(-) 22,638	(-) 87,677
Tasmania	(+) 1,258	(+) 21,130	(+) 13,834	(-) 1,668	(-) 49,067
Australia	(+) 487,954	(+) 1,143,768	(+) 1,541,081	(+) 1,466,059	(+) 364,352

(+) Denotes profit. (-) Denotes loss.

(iii) *Profit or Loss of Branches.* The following table shows the profit or loss on the various branches during the five years dealt with :—

PROFIT OR LOSS, BRANCHES, POSTMASTER-GENERAL'S DEPT., 1920 TO 1924.

Year ended 30th June—	Postal.		Telegraph.		Telephone.		All Branches.	
	Loss.	Profit.	Loss.	Profit.	Loss.	Profit.	Loss.	Profit.
	£	£	£	£	£	£	£	£
1920	81,217	..	95,636	..	311,101	..	487,954
1921	929,605	8,312	..	..	222,475	..	1,143,768
1922	1,258,286	..	1,809	..	280,986	..	1,541,081
1923	1,365,064	78,460	..	..	179,455	..	1,466,059
1924	502,667	188,982	..	..	50,667	..	364,352

The losses throughout the period covered by the table were confined to the Telegraph Branch, the large total in 1924 arising mainly from increased charges on account of pensions, operating costs, and interest.

§ 2. Telegraphs.

1. **General.**—A review of the development of the Electric Telegraph Services in Australia was given in a previous issue of this work (see Year Book No. 15), but limitations of space preclude the repetition of this information in the present issue.

2. **Telegraph Offices, Length of Lines and Wire.**—(i) *Summary for Australia.* The following table shows the number of telegraph offices and the length of telegraph lines and of telegraph wire available for use in Australia in each year from 1920 to 1924 :—

TELEGRAPHS.—AUSTRALIA, SUMMARY, 30th JUNE, 1920 TO 1924.

Particulars.	1920.	1921.	1922.	1923.	1924.
Number of offices	6,251	6,366	6,641	6,987	7,709
Length of wire (miles)—					
Telegraph purposes only	63,458	63,295	62,781	62,619	63,528
Telegraph and telephone purposes ..	79,930	82,234	84,855	91,461	105,351
Length of line (miles)—					
Conductors in Morse cable	2,152	2,133	2,139	2,139	2,201
Conductors in submarine cable	1,736	1,851	2,067	2,193	2,415
Pole routes (miles)	60,693	60,580	62,489	66,648	71,828

(ii) *Particulars for each State.* The following table gives corresponding particulars for each State for the year 1923–24 :—

TELEGRAPHS.—STATES, SUMMARY, 30th JUNE, 1924.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Aus- tralia.
Number of offices	2,588	2,040	1,146	687	722	526	7,709
Length of wire (miles)—							
Telegraph purposes only	21,761	6,497	13,750	12,003	9,381	136	63,528
Telegraph and Telephone purposes	35,062	21,327	22,668	8,546	11,915	5,833	105,351
Length of line (miles)—							
Conductors in Morse cable	722	1,095	349	..	21	14	2,201
Conductors in submarine cable (statute miles)	1,792	440	57	71	5	50	2,415
Pole routes (miles)	27,579	10,486	11,684	8,498	10,098	3,483	71,828

A total length of 168,879 miles of wire is available for telegraph purposes, of which 105,351 miles are also used for telephone purposes, and the figures show increases of 14,799 and of 13,890 miles respectively over the corresponding mileages for the previous year.

3. **Number of Telegrams Dispatched.**—(i) *Total for Australia.* The number of telegrams dispatched to destinations within Australia in each of the last five years is given hereunder :—

TELEGRAMS DISPATCHED.—AUSTRALIA, 1920 TO 1924.

Telegrams.	Year ended 30th June—				
	1920.	1921.	1922.	1923.	1924.
Number(a)	17,934,998	16,723,111	15,796,022	15,828,629	16,699,199

(a) Including interstate cablegrams.

(ii) *Totals for each State.* The appended table shows the number of telegrams dispatched in each State in 1923–24 for delivery in that State, the number dispatched in each State for delivery in other States, and the total number of telegrams—exclusive of cablegrams for places outside Australia—dispatched in each State :—

TELEGRAMS DISPATCHED.—STATES, 1923–24.

State, etc. ..	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
Inland	4,327,372	2,813,300	2,140,331	1,073,156	1,391,321	343,375	12,088,855
Interstate (a) ..	1,430,570	1,297,652	707,212	540,084	378,613	256,213	4,610,344
Total	5,757,942	4,110,952	2,847,543	1,613,240	1,769,934	599,588	16,699,199

(a) Including interstate cablegrams.

The figures in the foregoing table show an increase in the total volume of telegraph business of 870,570 messages as compared with the previous year.

4. **Letter-telegrams.**—Letter-telegrams are accepted at any hour at telegraph offices which are open for business after 7 p.m., subject to the condition that delivery is effected by posting at the letter-telegram office of destination. On the 1st April, 1923, the service applied to 101 offices.

5. **Wireless Telegraphy and Telephony.***—(i) *General.* The first step towards the establishment of wireless telegraphy in Australia was taken in 1905, when the Federal Parliament passed the *Wireless Telegraphy Act*, under which the Government took complete control of wireless activities. The first land stations in Australia were erected in 1905 at Devonport (Tasmania) and Point Lonsdale (Victoria) by the Marconi Company, London, for demonstration purposes. In 1907, a Conference consisting of Admiral Henderson and representatives of the Commonwealth Defence Department and Postmaster-General's Department recommended the establishment of stations at Sydney, Cape York, Port Moresby, and Torres Straits, to be followed by establishments at Wilson's Promontory, Fremantle, Cape Leeuwin, North Coast of Tasmania, and Geraldton.

* Prepared from particulars supplied by the Chief Manager, Telegraphs and Wireless.

In 1909 a resolution in the following terms was passed by the Federal Parliament :—

“ This House is of opinion that wireless telegraphic stations should be immediately established as found desirable around the coasts of Australia, and that our merchant marine should be equipped with wireless installations as an up-to-date means—

- (1) of gaining intelligence of the appearance in Australian waters of a hostile force ; (2) of saving life and property imperilled by accidents upon the sea.”

In October, 1909, the Postmaster-General's Department made arrangements for the installation of stations at Sydney and Perth. These were completed at a cost of £10,330, and opened for business during August and September, 1912, respectively. Prior to this year stations under permit were in operation at Randwick (New South Wales) and at King Island (Tasmania). The latter was closed on the introduction of the Commonwealth's commercial system referred to hereinafter. In addition to these, a station handling commercial traffic with ships was erected and worked during 1911 and 1912 by a private company at Sydney. In 1911, an officer with the title of Engineer for Radio-telegraphy was appointed by the Commonwealth Government, which thenceforward controlled all wireless activities.

The following stations, for which the necessary equipment was almost entirely manufactured in Sydney, were opened in the order named between February, 1912, and May, 1914 :—Melbourne : Hobart : Brisbane : Adelaide : Port Moresby : Thursday Island : Mount Gambier : Geraldton : Rockhampton : Cooktown : Esperance : Townsville : Broome : Darwin : Flinders Island : Roebourne : Wyndham. These stations completed the chain round the coast, but stations serving as extensions of the land telegraph system were opened at King Island in January, 1916, and at Samarai in September, 1917.

During the war period—from 1915 till 1920—the radio stations were controlled by the Navy Department. On the resumption of control by the Postmaster-General's Department in 1920, a reorganization of the service was undertaken. The stations at Roebourne and Mount Gambier were closed in 1921. In 1922, however, the stations were transferred to Amalgamated Wireless Limited under the terms of the following agreement.

The Wireless Agreement Act of 1922 provided for the increasing of the capital of Amalgamated Wireless Limited from 200,000 to 1,000,000 shares of £1 each, the Commonwealth Government to hold 500,001 shares and to have the right to nominate three directors on the Board. There are also three directors nominated by the Company, and a seventh independent director elected by the other six directors. These seven directors elect their own Chairman. Under the agreement the Company was required, within three years from the date of signing, to arrange for the erection of a high-power station in Australia, and corresponding stations in Great Britain and Canada, such stations to be capable of maintaining a service of 20 words per minute for 20 hours per day for 300 days per year. The Company was also required to reorganize the Australian coastal stations and the stations in New Guinea and Papua to provide a service equal to that previously given by the Post Office, and to erect feeder stations in the capital cities to maintain communication with the main high-power station. For a period of three years (and seven years in the case of the New Guinea stations) the loss on working of the coastal stations was to be met by the Government. Preliminary steps were taken in connexion with the erection of a high-power station, but owing to the development of the “ beam ” system of transmission, authority was obtained under the Wireless Agreement Act of 1924 to arrange for the erection of a beam station. A contract for this station was let in 1925, the site selected being at Ballan, near Melbourne. It is expected that this station will be in operation before the close of 1925, and that it will be able to maintain communication at high speed for several hours during the day and night.

With the exception of the war period, licences for experimental and amateur stations have been issued since 1911, with restrictions on the use of transmitting equipment. At the end of April, 1925, there were 1,808 such experimental stations, including 270 transmitting stations.

The regulations were amended in 1920 with a view to encouraging the erection of "land" stations by pastoralists and others in remote districts, but very few satisfactory applications were received. The Department, however, decided to erect stations at Wave Hill and at Camooweal to collect and distribute messages from private stations that might subsequently be erected in the Northern Territory. It is hoped that the two Government stations will be in operation before the end of 1925.

A chain of stations exists in Papua and the Territory of New Guinea. The Papuan stations (Port Moresby and Samarai) have already been referred to with the exception of Woodlark Island, which was built in 1914 by the Commonwealth Radio Service, and was retained by the Naval Radio Service until October, 1920, when it was closed. In addition to these stations, German medium-power stations were captured by the Australian Expeditionary Force at Rabaul and Nauru in 1914. Further stations in the ex-German territory were constructed for the Commonwealth Radio Service in 1915—immediately prior to the transfer to the Naval Department, viz.:—Kavieng: Kieta: Madang: Manus: Morobe: Aitape. The administration of these stations was carried on by the Commonwealth Radio Service until 1915, when the Administrator of the Territory assumed control, which control continued until the Civil Administration was introduced in the Territory. These stations were subsequently transferred to Amalgamated Wireless Limited in conjunction with the other coastal radio stations.

The Navigation Act in 1921 introduced additional regulations framed in consonance with the International Convention for the Safety of Life at Sea of 1914. These regulations require that all ships registered in Australia of 1,600 tons or more registered tonnage, or carrying more than 12 passengers, shall be fitted with an efficient wireless telegraphy installation. At the end of April, 1925, there were 127 vessels so equipped.

In 1923 the regulations were amended to provide for the licensing of broadcasting stations and the conduct of broadcasting business generally. These regulations were based on proposals made by a conference in 1923 representative of all the broadcasting interests in Australia. The main proposals of the conference were—(1) Competitive broadcasting services were to be permitted. (2) The licensees of the broadcasting stations were to arrange for subscriptions to the service from listeners with sealed receivers. (3) These receivers were to be sealed by the manufacturers (after the master type had been approved and sealed by the Post Office). Provision was also made for multi-wave receivers, the owners of which were required to pay subscriptions to all the stations which the receivers were capable of picking up. (4) The subscriptions to the broadcasting services were obtained by the issue of receiving licences issued on behalf of the Department by licensed radio dealers. (5) The wave length of each station was to be sealed from a band of wave lengths from 250 to 5,000 metres, subsequently reduced to 3,000 metres.

The Postmaster-General's Department accepted these recommendations, but it was soon found that the regulations with regard to sealed receivers were not satisfactory, and they were amended in July, 1924.

Two broadcasting licences were issued in New South Wales, and the stations were opened towards the close of 1923. A small number of receiving licences was also issued in this State.

The revised regulations issued in 1924 prescribed the licence fees to be paid by owners of receiving sets, and by radio dealers and experimenters. Each State was divided into three zones, and the annual fees and the distances from the capital city of the respective zones were fixed as follows:—

Class of Licence.	Zone 1. Up to 250 Miles.	Zone 2. 250 to 400 Miles.	Zone 3. Beyond 400 Miles.
	£ s. d.	£ s. d.	£ s. d.
Experimental licence	1 0 0	0 17 6	0 15 0
Broadcast listeners' licences	1 15 0	1 10 0	1 5 0
" " " (Temporary*)	1 0 0	0 17 6	0 15 0
Experimental licence (Temporary*)			
Dealers' licences	5 0 0	3 0 0	2 0 0

* Per week. Others for one year.

The Postmaster-General may reduce the fees at the end of the first year; and in the second year, which commences on the 1st July, 1926, the whole scheme may be reviewed.

Of the revenue obtained from the licence fees the Postal Department retains 5s. for each special and ordinary broadcast listener's licence, 25 per cent. for a temporary broadcast listener's licence, 25 per cent. for a dealer's licence, and 10s. for an experimental licence, the remainder of the revenue being available for distribution to the broadcasting company or companies in the State in which the revenue is collected. The companies must supply a satisfactory programme, use the authorized power, and provide effective transmission.

Two classes of broadcasting stations may operate, viz.:—Class A—in respect of which the receiving licence fees are payable, and Class B—in respect of which no receiving licence revenue is payable. In New South Wales and Victoria two Class A. stations only may be licensed. The licensees of these stations receive respectively 70 per cent. and 30 per cent. of the licence fees available for distribution. In the other States one Class A. station only may be licensed, and the whole of the “available revenue” for the particular State will be payable in respect of the station. The fees payable to the Department for Class A. licences are £15, and for Class B. £5, the licence being valid for a period of 5 years.

The number of receiving licences in operation in Australia up to the end of March, 1925, is as follows:—Broadcast listeners' licences, 52,780; Dealers' licences, 1,776; Experimental licences—Transmitting and receiving, 270; Receiving only, 1,538.

(ii) *Radio Stations (Pacific Ocean).*—Radio-telegraphic stations have been erected at Suva, Ocean Island, Tulagi, and Vila under the control of the High Commissioner of the Pacific, while the New Zealand Government has erected high-power stations at Awanui (Auckland), Awarua (Bluff), and Apia (Samoa), and low-power stations at Auckland, Chatham Islands, Raratonga (Cook Islands), and Wellington.

(iii) *Licence Fees.* In addition to the licences referred to in sub-section (i) *ante* the regulations provide for the issue of the following licences, for which the respective fees per annum, payable in advance, are as shown, viz.:—(a) Coast Station, £1; (b) Ship Station, £1; (c) Land Station, £1; (d) Portable Station, £1; and (e) Aircraft Station, £1.

(iv) *Licences Issued.* The following table shows the number of each class of licence issued in each State, &c., during the year 1924:—

WIRELESS LICENCES, 1924.

Station Licence.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	Aust.	Papua.	Terr. of New Guinea.	Grand Total.
Coast	1	1	6	1	5	3	1	18	1	7	26
Ship	20	82	3	16	2	2	..	125	..	..	125
Land .. ..	..	..	..	..	..	1	..	1	2	..	3
Broadcasting ..	6	6	2	2	1	..	..	17	..	..	17
Broadcast listeners—											
Ordinary	25,331	7,280	531	1,182	1,634	215	..	36,173	..	..	36,173
Special	10	11	2	4	8	8	..	43	..	..	43
Temporary	46	62	9	18	24	6	..	165	..	..	165
Experimental—											
Transmitting and receiving	18	17	3	9	4	2	..	53	2	..	55
Receiving only	97	55	14	18	10	4	..	198	..	..	198
Portable .. ..	..	..	..	..	..	..	..	..	..	..	..
Aircraft .. ..	..	..	..	..	..	..	..	..	..	..	..
Total Licences issued	25,529	7,514	570	1,250	1,688	241	1	36,793	5	7	36,805

Licences previously issued by the Minister for the Navy under the Naval Defence Act 1910–1918, or by the Postmaster-General under the Act, and which were in force on 1st December, 1922, are not prejudiced by these Regulations.

(v) *Radiotelegraphic Traffic.* (a) *Coast Stations.* The following statement shows the traffic handled by the several coast stations during the year 1923-24 :—

RADIO TRAFFIC.—COAST STATIONS, 1923-24.

State or Territory.	Particulars.					
	Messages.				Total Paying Words.	Stations in Operation.
	Paying.	Service.	Weather.	Total.		
	No.	No.	No.	No.	No.	
New South Wales ..	19,788	345	3,382	23,515	289,608	1
Victoria ..	14,159	3	1,349	15,511	190,490	1
Queensland ..	48,013	4,038	5,507	57,558	833,546	5
South Australia ..	6,066	271	1,002	7,339	72,173	1
Western Australia ..	15,908	713	2,798	19,419	158,111	5
Tasmania ..	8,664	9	192	8,865	134,603	3
Northern Territory ..	471	36	868	1,375	6,320	1
Australia	113,069	5,415	15,098	133,582	1,684,851	17
Papua	16,905	372	1,210	18,487	329,704	2
Grand Total ..	129,974	5,787	16,308	152,069	2,014,555	19

(b) *Island Stations.* Particulars of the island radio traffic dealt with during the year 1923-24 are given hereunder :—

RADIO TRAFFIC.—ISLAND STATIONS, 1923-24.

Particulars.	To Australia.	From Australia.	Inter-Island.	Ship.	Service.	Total.
Messages	9,017	7,252	6,251	2,028	4,788	29,336
Words	169,967	179,945	174,738	29,704	67,580	621,934

(vi) *Proficiency Certificates.* Proficiency certificates for commercial wireless operators are issued by the Minister to individuals who pass the specified tests. Amateur operators' certificates and watchers' certificates are, in addition, issued to successful candidates at the prescribed examinations.

Every ship-station and coast-station, in respect of which a licence is issued, must be operated by a person holding a certificate of proficiency.

At 31st December, 1924, 839 first-class and 31 second-class proficiency certificates in addition to 28 watchers' certificates had been issued.

6. **Revenue and Expenditure.**—Particulars as to the revenue from the telegraph systems for the years 1919-20 to 1923-24 were given in earlier pages.

§ 3. Submarine Cables.

1. **First Cable Communication with the Old World.**—In earlier issues of the Year Book will be found a detailed account of the connexion of Australia with the old world by means of submarine cables. (See No. 6, p. 770.)

2. **The Tasmania-Victoria Cables.**—These cables were opened to the public on the 1st May, 1909. Their aggregate length is approximately 350 nautical miles of main cable, and 20 nautical miles each of intermediate and shore-end cable, making a total of 390 nautical miles.

3. *The Eastern Extension Company's Cables.*—In addition to the first Tasmania-Victoria cable and the original cable from Darwin (see Year Book No. 6, p. 770), the Eastern Extension Company has constructed several other cables connecting with various places in Australia., viz., Darwin to Banjoewangie (two lines); Fremantle to Durban; Fremantle to Adelaide; Java to Cocos Island, which provides another route between Australia and South Africa; and a cable partly owned by this Company connecting the Darwin-Singapore cable with London *via* Hong Kong, Shanghai, Possiet Bay (Pacific Russia), Libau (Latvia), and Newbiggin (London).

4. *The Pacific Cable.*—(i) *Cable Lines.* The Pacific Cable lines are controlled by the Pacific Cable Board, consisting of three representatives of the Imperial Government, two each from Canada and Australia, and one from New Zealand. The main cable route known as the "All Red" runs from Southport in Queensland to Bamfield in British Columbia, thence overland to Montreal. From this point messages are transmitted across the Atlantic over the cables of the Anglo-American and Commercial Companies, or, if so desired, the Marconi Wireless System between Canada and the United Kingdom may be availed of for either homeward or outward messages. Cable stations are established at Norfolk Island, Fiji, and Fanning Island. A branch cable approximately 600 miles long runs from Norfolk Island to Doubtless Bay, North Island of New Zealand.

The assent of each of the Governments interested was obtained for the duplication of the system south of Fiji, and a contract for the submarine cables was placed with the Telegraph Construction and Maintenance Company, of Greenwich, and the laying of the Sydney-Southport cable was completed on 11th July, 1923, and the Auckland-Suva cable on 12th August, 1923.

During the year 1923-24 the cables worked without interruption, and no repairs were necessary.

(ii) *Financial Summary.* The receipts for the year 1923-24 exceeded the ordinary expenses by £250,778. After payment of the annuity of £77,545 in respect of interest and repayment of the capital of £2,000,000, and of the annuity of £9,150 to the renewal fund for interest and sinking fund on £177,254 borrowed from the fund for the purposes of the Auckland-Sydney cable, there remained a surplus of £164,083, which, in view of the question of the duplication of the northern cables, was employed to strengthen the reserve and renewal fund. The following table gives the revenue, expenditure, total profit, and the proportion thereof payable to Australia for the years ended 31st March, 1920 to 1924.

PACIFIC CABLE—FINANCIAL SUMMARY, 1920 TO 1924.

Year ended 31st March—	Revenue.	Expenditure (including Annuities and Renewal Fund).	Profit.	Australian Proportion of Profit.
	£	£	£	£
1920 ..	664,986	654,552	10,434	3,478
1921 ..	633,343	629,866	3,477	1,159
1922 ..	528,428	507,666	20,762	6,921
1923 ..	529,228	529,228	..	..
1924 ..	551,789	551,789	..	..

5. *New Zealand Cables.*—A submarine cable, 1,191 miles in length, from New Zealand to Australia, was laid in 1876. The Australian shore-end of the cable is at Botany Bay, while the New Zealand terminus is at Wakaupaka near Nelson in the Middle Island, from which place another cable, 109 miles in length, is laid to Wanganui in the North Island. A second cable between New Zealand and Australia (Auckland to Sydney) was opened for traffic on the 31st December, 1912.

6. **The New Caledonia Cable.**—This cable was opened for use in October, 1893, the Australian shore-end being at Burnett Heads, near Bundaberg. The guarantees of the Governments of New South Wales and Queensland have since been transferred to the Commonwealth Government.

7. **Lengths of Cable Routes.**—Particulars regarding the lengths of the various routes were given in preceding issues of the Official Year Book (see No. 17, p. 358), but limitations of space preclude their repetition in the present volume.

8. **Cable Business.**—(i) *Australia.* The subjoined table shows the number of cablegrams received and dispatched in Australia from 1921–22 to 1923–24 :—

CABLEGRAMS.—AUSTRALIA, 1921–22 TO 1923–24.

Cablegrams.	Cablegrams Received.			Cablegrams Dispatched.			Total Cablegrams Received and Dispatched.		
	1921–22.	1922–23.	1923–24.	1921–22.	1922–23.	1923–24.	1921–22.	1922–23.	1923–24.
Number ..	499,104	533,977	565,981	499,634	539,926	567,571	998,738	1,073,903	1,133,552

(ii) *States.* The number of cablegrams received and dispatched in each State during the year 1923–24 is given hereunder :—

CABLEGRAMS.—STATES, 1923–24.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas. (a)	Australia.
Number received ..	277,803	205,568	22,231	28,295	24,497	7,587	565,981
Number dispatched	275,847	197,290	25,562	31,632	29,145	8,095	567,571
Total ..	553,650	402,858	47,793	59,927	53,642	15,682	1,133,552

(a) Exclusive of interstate cablegrams, which are included with interstate telegrams.

9. **Cable Subsidies Paid.**—The following table shows the amount of subsidy paid in each of the years 1920 to 1924 :—

CABLE SUBSIDIES, 1920 TO 1924.

Subsidies.	Year ended 30th June—				
	1920.	1921.	1922.	1923.	1924.
Amount .. £	3,797	3,749	3,840	3,985	2,136

As the agreement in connexion with the Tasmanian cable expired in 1909, and as new cables were laid by the Commonwealth Government, the guarantees were, in the course of the year 1910, reduced to those in connexion with the New Caledonia and Pacific cables. From 1915–16 onwards the only cable subsidy paid by Australia was in respect of the New Caledonian cable guarantee.

§ 4. Telephones.

1. Telephone Services.—(i) *Mileage, etc., Australia.* The following table shows the mileage of lines, etc., for telephone purposes, giving trunk lines separately, on 30th June, 1923 and 1924 :—

TELEPHONE LINES—AUSTRALIA, 30th JUNE, 1923 AND 1924.

Particulars.	1923.	1924.
Ordinary Lines—		
Conduits duct miles	3,146	3,447
Conductors in aerial cables loop mileage	34,986	32,289
Conductors in underground cables „	312,224	362,037
Conductors in cables for junction circuits „	49,493	54,165
Open conductors single wire mileage	221,832	250,898
Trunk Lines—		
Telephone trunk lines only miles	40,851	55,516
Telegraph and telephone purposes „	91,461	105,351

(ii) *Summary for States.* Particulars relating to the telephone service in each State for the years ended 30th June, 1922 to 1924 will be found in the following table :—

TELEPHONE SERVICES.—SUMMARY, 1922 TO 1924.

Particulars.	Year (30th June.)	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
No. of Exchanges ..	1922	960	814	421	221	133	154	2,703
	1923	1,026	708	448	241	169	233	2,825
	1924	1,085	1,062	499	296	216	270	3,428
No. of Telephone Offices (Including Exchanges)	1922	2,185	1,678	798	513	390	428	5,992
	1923	2,274	1,739	902	572	461	454	6,402
	1924	2,456	1,955	1,093	621	739	503	7,367
No. of lines connected ..	1922	80,042	55,986	25,575	17,402	10,624	6,257	195,886
	1923	87,352	61,201	27,612	19,306	11,590	6,917	213,978
	1924	97,310	71,352	30,619	23,155	12,029	7,809	243,174
No. of instruments connected	1922	104,108	77,744	31,878	23,248	13,748	7,751	258,477
	1923	113,645	84,452	34,631	25,663	14,793	8,516	281,703
	1924	125,995	97,528	38,318	30,332	16,410	9,696	318,279
(a) No. of subscribers' instruments	1922	100,747	75,914	30,561	22,421	13,151	7,418	250,212
	1923	110,200	82,508	33,241	24,832	14,144	8,024	272,949
	1924	122,216	95,418	36,815	29,459	15,661	9,175	308,744
(b) No. of public telephones	1922	1,787	1,469	888	523	368	213	5,248
	1923	1,815	1,480	942	567	407	373	5,584
	1924	1,945	1,640	1,035	588	475	399	6,082
(c) No. of other local instruments	1922	1,574	361	429	304	229	120	3,017
	1923	1,630	464	451	264	242	119	3,170
	1924	1,834	470	468	285	274	122	3,453
Instruments per 100 of population	1922	4.84	4.95	4.06	4.57	4.05	3.63	4.64
	1923	5.19	5.28	4.35	5.00	4.25	3.98	4.97
	1924	5.66	5.95	4.63	5.70	4.55	4.55	5.48
Earnings ..	1922	£ 1,086,908	£ 777,388	£ 375,541	£ 271,881	£ 154,799	£ 79,548	£ 2,746,065
	1923	£ 1,184,035	£ 850,182	£ 411,523	£ 304,061	£ 166,338	£ 87,268	£ 3,003,407
	1924	£ 1,290,972	£ 945,409	£ 454,750	£ 343,840	£ 182,153	£ 95,485	£ 3,312,615
Working expenses ..	1922	856,255	479,304	231,414	170,360	133,048	71,150	1,991,531
	1923	959,836	574,487	326,389	197,520	141,958	83,352	2,283,542
	1924	1,089,221	676,069	363,144	245,239	153,370	96,796	2,623,839
Percentage of working expenses on earnings	1922	78.78	61.66	74.93	62.66	85.95	89.44	72.52
	1923	81.06	67.57	79.31	61.96	85.34	95.51	76.03
	1924	84.37	71.51	79.85	71.32	84.20	101.37	79.21

In Australia there were 243,174 telephone lines connected to 3,428 exchanges at 30th June, 1924, an increase of 29,196 and 603 respectively over the corresponding figures for the preceding year.

(iii) *Subscribers' Lines and Calling Rates.* The next table gives the number of subscribers' lines and the daily calling rate at central, suburban, and country telephone exchanges in the several States for the year 1923-24 :—

TELEPHONES.—SUBSCRIBERS' LINES AND DAILY CALLING RATE, 1923-24.

State.	Central Exchanges.		Suburban Exchanges.		Country Exchanges.		Total.	
	Subscribers' Lines.	Average Outward Calls Daily per line.	Subscribers' Lines.	Average Outward Calls Daily per line.	Subscribers' Lines.	Average Outward Calls Daily per line.	Subscribers' Lines.	Average Outward Calls Daily per line.
New South Wales	11,969	9.47	44,758	3.45	37,144	1.85	93,871	3.58
Victoria ..	11,396	8.67	30,910	3.73	22,688	1.52	64,994	3.32
Queensland ..	7,861	7.65	4,565	3.13	17,799	2.77	30,225	4.09
South Australia ..	7,457	7.00	7,644	3.60	7,679	1.08	22,780	3.86
Western Australia	4,748	6.20	2,652	4.30	5,087	1.91	12,487	4.05
Tasmania ..	2,224	4.67	697	1.91	4,777	1.56	7,698	2.49
Australia ..	45,655	7.98	91,226	3.55	95,174	1.87	232,055	3.73

A comparison of the daily calling rates for each class of exchange shows that New South Wales registered the greatest number per line at central exchanges, Western Australia at suburban exchanges, and Queensland at country exchanges. Taking the figures for Australia, it will be observed that the average number of calls per line at central exchanges was more than double the number registered at suburban exchanges, while the average for suburban exchanges was slightly less than double the number shown for country exchanges.

(iv) *Trunk Line Calls and Revenue.* In the following table the number of telephone trunk line calls recorded, the amount of revenue received, and the average revenue per call are shown for each of the States for the years 1921-22 to 1923-24 :—

TELEPHONES.—TRUNK LINE CALLS AND REVENUE FOR THE YEARS 1921-22 TO 1923-24.

Particulars.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Australia.
Total Calls for Year—	No.	No.	No.	No.	No.	No.	No.
1921-22 ..	5,267,870	3,699,176	2,307,804	1,350,946	582,340	760,033	13,968,169
1922-23 ..	5,985,820	4,168,469	2,616,344	1,587,593	707,159	849,197	15,914,582
1923-24 ..	6,748,101	4,709,531	2,938,267	1,906,750	855,106	977,689	18,135,444
Total Revenue for Year—	£	£	£	£	£	£	£
1921-22 ..	197,295	138,643	112,396	62,077	26,911	24,921	562,243
1922-23 ..	221,919	157,062	128,364	73,292	33,365	28,368	642,370
1923-24 ..	243,529	170,959	144,890	84,025	38,803	31,013	713,219
Average Revenue per Call—	Pence.	Pence.	Pence.	Pence.	Pence.	Pence.	Pence.
1921-22 ..	8.98	8.89	11.69	11.03	11.09	7.87	9.66
1922-23 ..	8.89	9.04	11.77	11.08	11.32	8.02	9.65
1923-24 ..	8.66	8.71	11.83	10.57	10.88	7.61	9.44

The rapid growth in connexion with subscribers' services is bringing about increased trunk line traffic. Extensive works are in progress to meet the growing demand and to improve the trunk line system generally.

2. *Revenue from Telephones.*—Particulars regarding the revenue from telephone services are included in the tables at the end of § 1.

CHAPTER VIII.

FINANCE.

A. COMMONWEALTH FINANCE.

§ 1. General.

1. **Financial Provisions of the Constitution.**—The main provisions of the Constitution relating to the initiation and development of the financial system of the Commonwealth are contained in Chapter IV., "Finance and Trade," being sections 81 to 105 of the Constitution Act. Two other sections which have a most important bearing on questions of Commonwealth finance are sections 69 and 51.

Section 69 provides for the transfer to the Commonwealth from the States of certain specified departments, while section 51, in outlining the powers of the Federal Parliament, implies the transfer or creation of various other departments. Section 87 deals with the financial relations between the Commonwealth and the States. These matters have been treated in some detail in previous issues of the Official Year Book up to and including No. 12, and further reference to them will not be made here.

The Commonwealth Treasury issues annually a document entitled "The Treasurer's Statement of Receipts and Expenditure during the year ended 30th June," with which is incorporated the report of the Commonwealth Auditor-General for the year. This series of annual statements is the authority for the majority of the tables given herein.

2. **Accounts of Commonwealth Government.**—The Commonwealth Government, like the States Governments, bases its accounts mainly upon three funds, the Consolidated Revenue Fund, the Trust Fund, and the Loan Fund. The last mentioned fund came into existence in the financial year 1911-12, but on the outbreak of war it became so important that it is now treated in two parts—a General Loan Fund mainly for purposes of Public Works, and a War Loan Fund for purely military purposes. The accounts of these funds are now so interwoven that a proper conspectus of the Commonwealth Accounts can hardly be obtained by an analysis of each of them singly. Two tables are therefore appended, showing receipts and disbursements from all sources for the last five years. The different funds will then be treated in detail in the subsequent paragraphs.

COMMONWEALTH RECEIPTS, 1919-20 TO 1923-24.

Heading.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
	£	£	£	£	£
Consolidated Revenue	52,783,102	65,517,608	64,897,046	64,720,635	66,017,203
Trust Funds in aid of Revenue ..	3,523,057	5,724,806	6,618,327	6,408,424	7,428,574
Total	56,306,159	71,242,414	71,515,373	71,129,059	73,445,777
General Loan Fund	1,286,786	4,101,726	12,253,610	10,362,083	34,086,149
Unexpended Balance from previous years .. ..	..	..	..	822,079	1,557,078
Total	1,286,786	4,101,726	12,253,610	11,184,162	35,643,227
War Loan Fund	27,125,203	33,064,475	14,452,902	36,784	13,662,824
Unexpended Balance from previous years	18,945,392	..	6,205,030	8,889,183	4,296,988
Total	46,070,595	33,064,475	20,657,932	8,925,967	17,959,812
Grand Total	103,663,540	108,408,615	104,426,915	91,239,188	127,048,816

COMMONWEALTH EXPENDITURE, 1919-20 TO 1923-24.

Heading.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
Expenditure from Consolidated Revenue	£ 40,337,804	£ 52,059,118	£ 51,453,087	£ 50,108,510	£ 48,676,907
Balance paid into Trust Funds ..	5,724,806	6,618,327	6,408,424	7,428,571	600,003
Expenditure from Trust Funds ..	3,523,057	5,724,806	6,618,327	6,408,424	7,428,574
Unexpended Balance from Trust Funds					
Subsidy to States	6,720,492	6,840,163	7,035,535	7,195,551	7,324,538
Surplus allocated to specific purposes					4,500,000
Redemptions from Revenue					4,915,755
Total	56,306,159	71,242,414	71,515,373	71,129,059	73,445,777
General Loan Fund Expenditure	1,286,786	4,101,726	11,431,531	9,627,081	34,150,164
Unexpended Balance of General Loan Expenditure			822,079	1,557,078	1,493,063
Total	1,286,786	4,101,726	12,253,610	11,184,162	35,643,227
War Expenditure from War Loan Fund	46,070,595	26,859,445	11,768,749	4,628,979	16,973,913
Unexpended Balance from War Loan Fund		6,205,030	8,889,183	4,296,988	985,899
Total	46,070,595	33,064,475	20,657,932	8,925,967	17,959,812
Grand Total	103,663,540	108,408,615	104,426,915	91,239,188	127,048,816

§ 2. Consolidated Revenue Fund.

Division I.—Nature of Fund.

The provisions made for the formation of a Commonwealth Consolidated Revenue Fund, and the means to be adopted for operating on that fund, are contained in sections 81, 82, and 83 of the Constitution. In section 81 it is provided that "All revenues or moneys raised or received by the Executive Government of the Commonwealth shall form one Consolidated Revenue Fund, to be appropriated for the purposes of the Commonwealth in the manner and subject to the charges and liabilities imposed by this Constitution." A strictly literal interpretation of this section would appear to require all loan and trust moneys received by the Commonwealth Executive to be paid to Consolidated Revenue. It is, however, held by Quick and Garran, in their "Annotated Constitution," that the "generic word *moneys* must be controlled by the preceding specific word *revenues*, and limited to moneys in the nature of revenue." This is the view of the matter which has been adopted by the Commonwealth Treasury in the preparation of its accounts. At present, certain moneys received by the Commonwealth, which are not of the nature of revenue, are paid to Trust Account, and other moneys are paid to Loan Account. As regards expenditure from the Consolidated Revenue Fund, section 82 provides that the costs, charges, and expenses incident to the collection, management, and receipt of the Consolidated Revenue Fund should form the first charge thereon, while section 83 stipulates that "no money shall be drawn from the Treasury of the Commonwealth except under appropriation made by law." Such appropriations are either special, and as such are provided for by means of a permanent Act, or annual, and provided for in an annual Appropriation Act.

Division II.—Revenue.

1. Total.—The consolidated revenue of the Commonwealth, which in 1901-2, the first complete financial year under the new régime, amounted to £11,296,985, had, in 1923-24, reached a total of £66,017,203, an increase in the period of £54,720,218.

Particulars concerning the total amount of revenue collected by the Commonwealth Government from 1st July, 1919, to 30th June, 1924, are contained in the following table:—

COMMONWEALTH CONSOLIDATED REVENUE, 1919-20 TO 1923-24.

Revenue.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
	£	£	£	£	£
Total ..	52,783,102	65,517,608	64,897,046	64,720,635	66,017,203

The great increase in recent years is due to the large expansion in taxation, which is considered in detail in a later sub-section.

2. Revenue per Head.—The table hereunder gives particulars of the amount of revenue from various sources per head of population for the last five years:—

COMMONWEALTH CONSOLIDATED REVENUE PER HEAD, 1919-20 TO 1923-24.

Source of Revenue.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Taxation	7 17 10	9 13 9	9 0 4	8 17 1	8 16 11
Public Works and Services ..	1 8 7	1 13 4	1 14 8	1 14 9	1 13 11
Other Receipts	0 12 7	0 15 1	1 0 7	0 17 11	0 18 10
Total	9 19 0	12 2 2	11 15 7	11 9 9	11 9 8

3. Sources of Revenue.—(i) General. The following table furnishes details of the revenue from each source during the years 1919-20 to 1923-24:—

COMMONWEALTH CONSOLIDATED REVENUE—SOURCES, 1919-20 TO 1923-24.

Source.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
	£	£	£	£	£
Taxation—					
Customs	13,705,220	21,731,210	17,328,310	22,597,306	25,177,882
Excise	7,869,339	10,078,696	10,302,049	10,274,823	10,572,902
Land Tax	2,110,306	2,155,699	2,284,040	2,018,876	2,030,127
Estate Duty	1,441,819	1,179,513	991,378	1,172,935	1,320,911
Income Tax	12,848,123	14,351,408	16,790,682	12,904,518	11,057,555
Entertainments Tax	567,911	649,828	675,675	629,802	622,460
War Time Profits Tax	2,569,012	2,083,139	1,806,708	286,757	70,646
War Postage	745,962	197,928	..	..	..
Total	41,847,692	52,427,421	49,678,842	49,885,017	50,852,483
Public Works and Services—					
Postal	6,744,755	8,388,569	9,320,654	9,792,273	9,757,021
Railways	265,918	235,387	217,301	230,136	232,406
Commonwealth Steamers .. ..	..	137,959	..	..	..
Detained Enemy Vessels	344,411	131,763	..	..	..
Other	218,209	141,418	4,094	14,340	..
Total	7,573,293	9,035,096	9,542,049	10,036,749	9,989,427
Other Revenue—					
Interest, Discount, etc.	1,589,347	1,996,012	2,361,137	2,574,962	2,386,136
Coinage	76,439	106,373	178,439	137,696	151,682
Defence	183,227	185,649	150,297	223,402	315,708
Quarantine	62,053	42,972	42,639	41,388	38,445
Territories, (a)	65,206	79,575	77,844	28,189	30,658
Patents, etc.	34,067	40,639	41,393	40,491	37,770
Lighthouses	153,992	180,105	171,967	173,363	179,733
Pension Contributions	57,642	54,632	57,489	58,205	56,638
Defence Trust Account	270,504	116,329	203,085	102,419	40,565
Unexpended Balances of London Orders	708,264	696,095	..	..	..
Net Profit on Australian Note Issue .. ..	..	394,016	1,261,482	1,072,893	1,264,583
Miscellaneous	161,376	162,694	1,130,383	345,861	673,375
Total	3,362,117	4,055,091	5,676,155	4,798,869	5,175,293
Grand Total	52,783,102	65,517,608	64,897,046	64,720,635	66,017,203

(a) Exclusive of Railways, and other items which appear elsewhere under their appropriate headings.

The revenue from taxation reached its highest point in 1920-21 with upwards of £52,400,000. The total taxation for 1921-22 was nearly £3,000,000 less than that for 1920-21, while that for 1923-24 was slightly above the total for 1922-23. With the exception of the year 1923-24, the postal receipts have shown a consistent upward tendency, and there was also a large addition to the revenue in several years from the operations of the Commonwealth steamers, detained enemy vessels, and other activities. During the last three financial years, however, the operations of the shipping line have resulted in a deficit. The large amount for 1921-22, under the head of "Miscellaneous," includes £835,000, payment on account of the Army of Occupation.

(ii) *Taxation.*—(a) *Customs Revenue.* Particulars for the five years 1919-20 to 1923-24 are furnished in the following table :—

COMMONWEALTH CUSTOMS REVENUE, 1919-20 TO 1923-24.

Classes.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
	£	£	£	£	£
Stimulants	1,880,531	1,773,103	1,981,882	2,294,264	2,604,200
Narcotics	1,590,450	1,533,860	1,619,916	1,699,023	1,746,785
Sugar	(a) 7,229	3,193	9,991	10,723	12,995
Agricultural products	726,360	819,842	951,816	1,156,209	1,296,361
Apparel and textiles ..	3,444,292	6,195,545	4,514,541	5,825,461	5,174,929
Metals and machinery	2,165,221	4,728,937	3,324,601	3,732,677	4,323,070
Oils, paints, etc. ..	311,022	542,619	409,768	563,257	696,235
Earthenware, etc. ..	280,064	643,731	503,941	557,017	631,056
Drugs and chemicals ..	289,437	420,327	395,777	536,975	444,587
Wood, wicker and cane	274,500	540,638	552,842	1,054,543	1,209,814
Jewellery, etc. ..	413,134	704,749	525,207	723,180	773,206
Leather, etc. ..	576,106	690,455	482,389	1,131,572	1,561,086
Paper and stationery ..	467,623	1,091,173	633,261	746,906	723,267
Vehicles	625,498	1,033,006	718,080	1,553,355	2,673,447
Musical instruments ..	142,082	239,822	170,859	248,467	460,445
Miscellaneous articles	477,612	718,752	480,461	706,572	796,069
Other receipts	48,517	51,458	52,978	57,105	50,330
Total Customs	13,705,220	21,731,210	17,328,310	22,597,306	25,177,882

(a) Debit.

The receipts from this source in 1920-21 were abnormally high owing to the fulfilment of large numbers of contracts from abroad before the anticipated time. The large increase in 1922-23 and 1923-24 over previous years may be ascribed to the increase in imports due to a considerable extent to heavy borrowings abroad by the Commonwealth and State Governments.

(b) *Excise Revenue.* Particulars concerning the amount of Excise collected under each head during each of the years ending 30th June, 1920, to 1924, are given hereunder :—

COMMONWEALTH EXCISE REVENUE, 1919-20 TO 1923-24.

Particulars.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
	£	£	£	£	£
Beer	3,702,442	5,439,339	5,473,220	5,498,800	5,501,648
Spirits	1,609,065	1,558,766	1,510,432	1,617,975	1,757,414
Tobacco	2,545,214	3,055,308	3,288,852	3,124,926	3,284,594
Licences	12,598	12,569	12,716	12,780	12,428
Starch	20	12,714	16,829	20,342	16,818
Total Excise	7,869,339	10,078,696	10,302,049	10,274,823	10,572,902

A comparison of the Excise collections for 1923-24 with those for 1919-20, shows that the revenue from beer increased by 50 per cent. in the period under review, while that from tobacco has increased by more than 30 per cent. The large increase in every item except licences in the last four years is due to the operation of increased excise duties which came into force on 25th September, 1918.

(c) *Land Tax.* Details in regard to rates of tax, etc., will be found in Official Year Book No. 14 at the end of Section XX.

A table is appended showing the actual amounts received by the Treasury for five years. The yield of the tax has been remarkably constant, the decrease of £265,164 in 1922-23 being due mainly to the abolition during the year of the additional 20 per cent. tax which was imposed under Act No. 30 of 1918.

COMMONWEALTH LAND TAX COLLECTIONS, 1919-20 TO 1923-24.

State.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
	£	£	£	£	£
New South Wales ..	955,935	933,649	1,015,851	900,330	854,589
Victoria ..	818,769	865,001	910,764	748,016	818,328
Queensland ..	112,064	85,978	95,763	70,398	91,106
South Australia ..	118,318	166,260	174,983	181,893	162,593
Western Australia ..	60,613	63,349	45,820	80,952	64,345
Tasmania ..	44,607	41,462	40,859	37,287	39,166
Total ..	2,110,306	2,155,699	2,284,040	2,018,876	2,030,127

(d) *Estate Duty.* Collections from this source for the five years, 1919 to 1924, are given hereunder:—

COMMONWEALTH ESTATE DUTY COLLECTIONS, 1919-20 TO 1923-24.

Year.	N.S.W.	Vic. (b)	Q'land.	S. Aust.(a)	W. Aust.	Tas.	Total.
	£	£	£	£	£	£	£
1919-20 ..	399,896	700,629	60,670	144,077	99,826	36,720	1,441,818
1920-21 ..	385,070	432,281	98,054	171,450	76,516	16,142	1,179,513
1921-22 ..	363,731	372,126	97,785	82,698	39,865	35,173	991,378
1922-23 ..	483,616	397,489	100,158	132,833	41,455	17,384	1,172,935
1923-24 ..	477,974	555,324	87,278	147,035	27,322	25,978	1,320,911

(a) Including Northern Territory.

(b) Including Central Office.

(e) *Income Tax.* The first Commonwealth Income Tax was levied during the financial year 1915-16. The legislation on the subject comprises the Income Tax Assessment Act No. 34 of 1915, and subsequent amending Acts. Full details as to the original Acts are to be found in Commonwealth Official Year Book No. 9. The result of the last five years' collections was as follows:—

COMMONWEALTH INCOME TAX COLLECTIONS, 1919-20 TO 1923-24.

States.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
	£	£	£	£	£
New South Wales ..	4,291,947	4,920,154	5,273,221	4,274,432	3,629,203
Victoria (a) ..	5,325,003	5,867,958	7,312,618	5,525,429	4,873,611
Queensland ..	1,446,503	1,269,242	1,547,138	1,209,829	1,011,458
South Australia ..	906,837	1,382,029	1,494,210	1,072,821	713,042
Western Australia ..	558,026	557,277	692,339	624,781	552,779
Tasmania ..	318,051	350,382	463,421	292,641	274,510
Northern Territory ..	1,757	4,366	7,735	4,585	2,952
Total ..	12,848,124	14,351,408	16,790,682	12,904,518	11,057,555

(a) Including Central Office.

The steady rise up to 1921-22 was due in part to increases in the rates of tax, and in part to the increase in money incomes associated with rising prices. The large decrease in the collection for 1922-23 is accounted for mainly by the raising of the exemption to £200, the introduction of the averaging system, the reduction of rates under Act No. 38 of 1922, and the decision to exempt bonus shares not paid out of current profits for all previous years. The smaller amount collected during 1923-24 is due to the operation of concessions, including the increase in the deduction for children, and the reduction in the Company rate from 2s. 5d. to 1s.

Agreements between the Commonwealth and all the States except Western Australia were made in 1923 with respect to the collection of Commonwealth Income Tax. These agreements came into operation in the cases of New South Wales, Victoria and South Australia on 1st July, 1923, Tasmania on 10th October, and Queensland on 31st October, 1923. It is provided in each agreement that the Commonwealth Tax and the State Tax shall be collected by an officer acting for the Commonwealth and State, the Commonwealth appointing the State Commissioner as Deputy Commissioner for the State under the Income Tax Assessment Act of the Commonwealth. Provisions are included relating to the transfer of officers, the accounting of receipts and for the division of expenses. A joint form of Income Tax return is to be used in cases where the income is derived only in one State. The respective agreements are to remain in operation for a period of five years and thereafter until the expiration of not less than six calendar months upon notice being given in writing by either party to the agreement.

In Western Australia an arrangement was made previously by which the Commonwealth undertakes the collection of the State Income Tax.

(f) *Entertainments Tax.* The rate of Entertainments Tax, according to Amending Act No. 15 of 1922 which came into force on the 2nd October, 1922, is as follows:—For tickets of 1s., 1d.; exceeding 1s., 1d. for the first shilling, and $\frac{1}{2}$ d. for every subsequent sixpence or part of sixpence. The collections for the last five years are given hereunder.

The decreased returns for 1922-23 and 1923-24 as compared with 1921-22 are explained by the exclusion from taxation as from the 2nd October 1922, of amounts for admission under one shilling.

COMMONWEALTH ENTERTAINMENTS TAX COLLECTIONS, 1919-20 TO 1923-24.

State.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
	£	£	£	£	£
New South Wales ..	234,327	272,373	276,786	256,755	248,615
Victoria ..	176,411	203,781	222,210	208,240	212,011
Queensland ..	62,671	75,332	75,048	66,512	64,194
South Australia ..	38,990	42,210	45,925	45,015	46,114
Western Australia ..	34,210	39,716	38,420	37,605	35,358
Tasmania ..	10,993	16,266	17,193	15,589	16,066
Northern Territory ..	309	150	93	86	102
Total ..	557,911	649,828	675,675	629,802	622,460

(g) *War-Time Profits Tax.* This tax came into force on the 22nd September, 1917. It provides for a tax on the amount by which the profits made in the war-time financial year (1st July to 30th June following), exceeds the pre-war standard of profits, which may be either:—(a) the average profits of two of the three years before 4th August, 1917, or (b) 10 per cent. on the capital employed in the business. The tax in respect of profits derived in the financial year 1st July, 1915, to 30th June, 1916, was 50 per cent., and in all subsequent years 75 per cent. The collections for the last five years are given in the accompanying table. The original section 2 of the War Time Profits Tax Assessment Act stated that this Act would apply to the profits of any business arising up to 30th

June next after the Declaration of Peace in connexion with the late war. Subsequent to the signing of the armistice, on 11th November, 1918, the section was amended to accord with that intention, and thus fixed the final application of the Act to profits arising during the year ended 30th June, 1919. The figures for subsequent years represent delayed collections under this Act.

COMMONWEALTH WAR-TIME PROFITS TAX COLLECTIONS, 1919-20 TO 1923-24.

State.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
	£	£	£	£	£
New South Wales	880,442	784,339	376,480	43,524	8,412
Victoria (a)	1,066,161	930,927	687,211	168,255	Dr. 19,595
Queensland	230,283	122,728	83,892	70,402	33,767
South Australia	243,527	144,198	86,603	b Dr. 15,302	42,944
Western Australia	105,517	85,255	44,351	15,377	3,777
Tasmania	43,083	15,692	28,172	4,501	1,341
Total	2,569,013	2,083,139	1,306,709	286,757	70,646

(a) Including Central Office. (b) Including Northern Territory, £1,334.

(h) *War Postage.* This was a new source of revenue derived from an additional halfpenny rate imposed on postages from the 28th October, 1918. The amount credited to "War Postage" is the excess over the normal increase of revenue from postage. The amount collected for the balance of the financial year 1918-19 was £463,317, and in 1919-20 it was £745,962. In 1920-21 it fell to £197,928, as credits under this head of revenue ceased on 1st October, 1920.

(iii) *Public Works and Services.*—(a) *Postal Revenue.* Particulars concerning this branch of revenue for each of the financial years from 1919-20 to 1923-24 are contained in the following table:—

COMMONWEALTH POSTAL REVENUE, 1919-20 TO 1923-24.

Particulars.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
	£	£	£	£	£
Private boxes and bags ..	37,188	40,044	42,606	44,542	48,132
Commission—					
Money orders and postal notes	147,175	169,256	172,861	179,571	181,663
Telegraphs	1,274,527	1,369,922	1,375,584	1,405,664	1,426,542
Telephones	2,159,449	2,431,980	2,724,552	2,983,069	3,301,651
Postage	2,874,730	4,142,781	4,682,964	4,913,162	4,362,660
Radio Receipts	(a)	12,052	25,995	7,711	4,012
Miscellaneous	251,686	222,534	296,092	258,554	432,361
Total	6,744,755	8,388,569	9,320,654	9,792,273	9,757,021

(a) Credited to Navy Revenue.

The decrease of £550,502 in 1923-24 as compared with the preceding year under the sub-head "Postage" is due to reductions in postal rates. The item "Miscellaneous" includes a subsidy from the Commonwealth Bank for the conduct of Savings Bank business, payments by the United Kingdom in respect of mail transit rates, and certain allowances.

(b) *Railway Revenue.* The Commonwealth Government is responsible for four lines, the Kalgoorlie-Port Augusta, the Port Augusta-Oodnadatta, the Darwin-Katherine River, and the Federal Capital Territory line. The appended table shows the amounts paid into the credit of the Consolidated Revenue Fund on account of each of these railways for the past five years. Under an arrangement which came into effect on 1st January, 1914, the Port Augusta-Oodnadatta Railway is worked by the South Australian Government, and the Commonwealth Government receives the profit, if any, on the working, or pays the deficiency. Since 1914 there has always been a deficiency, which is met by a payment from the Commonwealth Government.

COMMONWEALTH RAILWAY REVENUE, 1919-20 TO 1923-24.

Railway.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
	£	£	£	£	£
Kalgoorlie-Port Augusta ..	233,564	221,386	201,084	215,368	215,945
Port Augusta-Oodnadatta ..	..	..	..	..	..
Darwin-Katherine River ..	31,783	12,761	14,370	14,768	16,461
Federal Capital Territory ..	571	1,240	1,847	(a)	(a)
Total	265,918	235,387	217,301	230,136	232,406

(a) Not available.

(c) *Commonwealth Steamships.* For the year 1922-23 the estimated earnings, including those of the detained enemy vessels, were £2,529,800, and the estimated expenditure £2,980,100, leaving a loss of £450,300 on the year's operations. Further information relative to the Commonwealth Government Line of Steamers will be found in Chapter VII., part A, Shipping.

(d) *Other Public Works and Services.* The most important items in 1919-20 were "Profit under Cornsacks Distribution Account" £130,472, and "Profit under Wool Tops Agreement" £78,273. In 1922-23 Sale of Dyes accounted for £13,851.

(iv) *Other Sources of Revenue.* (a) *Interest, Discount, etc.* The most important investments of the Commonwealth Government from which interest is derived are—Loans to States, General Trust Funds, Loans placed in London, Fixed Deposits with the Commonwealth and other Banks, and certain advances and overdrafts. In 1923-24 they included Interest on Loans and Advances to States, £1,833,919; Interest on General Trust Fund Investments, £352,271; Interest on Bank Deposits, £70,764; and Interest, Nauru Island Agreement, £88,018.

(b) *Coinage.* The Commonwealth Revenue under this head is derived from profit on coin issued, and for 1923-24 was made up of £123,349 for silver and £28,333 for bronze.

(c) *Defence.* The income from this source (which is derived from both Defence and Navy Offices) arises chiefly from sales of material and stores supplied, forfeitures, fines, costs, etc. In 1923-24, £148,105 was contributed by the Defence Department, and £167,603 by the Navy Office.

(d) *Patents, etc.* This heading includes Patents, Trade Marks, Copyright and Designs. In 1923-24, £27,639 was obtained from Patents, and £10,131 from Trade Marks, Copyright and Designs.

(e) *Defence Trust Account.* This is credited with receipts from Parliamentary appropriations, and from the Departments and the public for work done and material supplied. In the year 1923-24 the total receipts amounted to £150,775, and the expenditure to £110,210, leaving a balance of £40,565, which has since been paid into the Consolidated Revenue Fund, thus closing the account.

(f) *Unexpended Balance of London Orders.* The largely increased amount for the two years 1919-20 and 1920-21 is due to an amendment by the Treasury of the London Account Regulations, which superseded the system of charging votes upon the remittance of amounts from the Commonwealth, and made such charge only when payment in London was actually completed. This necessitated the closing of the Trust Account for London Liabilities, and the transfer of unexpended balances to the revenue. There were no unexpended balances in 1921-22, 1922-23, or 1923-24.

(g) *Miscellaneous.* This includes several items which are either small in themselves, or not included under separate headings, as they are virtually non-recurring. Thus in 1922-23 there was a payment into revenue of £168,709 on account of Sugar—Interest on Overdraft, and in 1923-24, a sum of £195,000 being a repayment of advances to Trust Fund—Cockatoo Island Dockyard Account.

Division III.—Expenditure.

1. *Nature of Commonwealth Expenditure.*—The disbursements by the Commonwealth Government of the revenue collected by it fell naturally, under the “book-keeping” system, into three classes, viz. :—

- (a) Expenditure on transferred services.
- (b) Expenditure on new services.
- (c) Payment to States of surplus revenue.

Of these three, only the first two were actual expenditure, the last being merely a transfer, the actual expenditure being incurred by the States. In accordance with the provisions of the Constitution, the expenditure on transferred services was, under the “book-keeping” system, debited to the several States in respect of which such expenditure was incurred, while the expenditure on new services was distributed *per capita*. Surplus Commonwealth revenue was paid to the States monthly. During the earlier years of Federation, viz., until the end of the year 1903-4, new works, etc., for transferred departments were treated as transferred expenditure, and were charged to the States on whose behalf the expenditure had been incurred. In subsequent years all such expenditure was regarded as expenditure on new services, and distributed amongst the States *per capita*. Under the arrangement, which superseded the “book-keeping” system, a specific subsidy of 25s. per head of population is made annually by the Commonwealth to the States, and there is no further debiting of expenditure to the several States.

2. *Total Expenditure.*—The total expenditure by the Commonwealth Government and the expenditure per head of population during the period 1919-20 to 1923-24 are shown in the following table :—

COMMONWEALTH EXPENDITURE, 1919-20 TO 1923-24.(a)

Particulars.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
	£	£	£	£	£
Total	50,581,353	64,624,087	65,106,949	63,700,485	63,430,019
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Per head	9 10 8	11 18 10	11 16 3	11 6 1	11 0 8

(a) Including expenditure from Trust Funds and subsidies to States.

The largely increased expenditure in recent years is due partly to Old-age and Invalid Pensions, but mainly to the expenditure from Revenue upon War Services and to the general rise in prices.

* For an exposition of the “book-keeping system” see Commonwealth Year Book No. 6, page 780.

3. Details of Expenditure from Consolidated Revenue.—(i) *General*. The following table gives details of the expenditure from Consolidated Revenue during the last five years. The amounts quoted for each Department represent the expenditure incurred on behalf of that Department:—

**COMMONWEALTH EXPENDITURE—CONSOLIDATED REVENUE,
1919-20 TO 1923-24.**

Heads of Expenditure.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
Cost of Departments—	£	£	£	£	£
Governor-General	27,215	30,707	27,897	28,045	27,845
Parliament	348,415	323,359	346,192	446,464	336,012
Prime Minister	312,408	434,939	733,528	908,527	1,094,661
Attorney-General	111,007	132,446	148,045	162,797	162,136
Treasury	5,829,504	6,664,051	6,984,277	7,180,785	8,034,480
Trade and Customs	992,142	964,993	889,121	2,243,809	1,627,818
Defence	2,912,639	4,184,719	4,456,198	3,785,582	3,852,531
Postmaster-General	6,136,920	7,305,243	8,188,686	8,242,025	9,273,494
Home and Territories	478,281	746,569	695,708	526,033	522,640
Works and Railways	714,196	698,392	609,327	1,127,306	669,331
Health .. .. .	..	..	172,227	153,912	167,917
Total	17,862,727	21,485,418	23,251,206	24,807,283	25,768,865
Miscellaneous—					
New Works	335,154	2,098,203	2,571,794	720,927	620,660
War Services	24,751,731	33,289,053	31,337,164	30,100,472	28,770,106
Subsidies to States	6,720,422	6,840,163	7,035,535	7,185,551	7,324,538
Interest—State Loans Act	911,250	911,250	911,250	886,250	945,850
Total	32,718,627	43,138,669	41,855,743	38,893,200	37,661,154
Grand Total	50,581,354	64,624,087	65,106,949	63,700,485	63,430,019

The amounts shown under the heading “Treasury” include payments from the Trust Fund on account of Pensions.

The items included under the above general heads are referred to in some detail in the succeeding sub-sections.

(ii) *Cost of Departments—(a) Governor-General*. Section 30 of the Constitution enacts that, until the Commonwealth Parliament otherwise provides, there shall be payable out of the Consolidated Revenue Fund for the salary of the Governor-General an annual sum of ten thousand pounds, and a proviso is made that the salary of the Governor-General shall not be altered during his continuance in office. The total expenditure in connexion with the Governor-General and establishment for the five years 1919-20 to 1923-24 is as follows:—

**EXPENDITURE.—GOVERNOR-GENERAL AND ESTABLISHMENT,
1919-20 TO 1923-24.**

Details.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
	£	£	£	£	£
Salary	10,000	10,000	10,000	10,000	10,000
Governor-General's Establishment	9,243	13,127	11,708	11,046	10,931
Contingencies (a)	7,972	7,374	6,189	6,999	6,914
Interest on Commonwealth Treasury Bills .. .. .	..	206	..	..	..
Total	27,215	30,707	27,897	28,045	27,845

(a) Represents official services outside the Governor-General's personal interests, and carried out in the main at the instance of the Government.

(b) *Parliament*. Under this head have been grouped all the items of expenditure connected with the Parliamentary government of the Commonwealth for the five years 1919-20 to 1923-24.

EXPENDITURE.—COMMONWEALTH PARLIAMENT, 1919-20 TO 1923-24.

Details.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
	£	£	£	£	£
Salaries of Ministers	15,231	15,368	15,300	14,598	13,569
Allowances to Senators	22,376	34,710	34,916	34,790	35,312
Allowances to Members of House of Representatives	40,993	69,133	69,395	65,275	74,359
Officers, staff, contingencies, etc. ..	40,182	51,661	63,253	61,484	61,418
Repairs, maintenance, etc.	1,663	1,686	2,529	1,800	1,894
Printing	21,347	23,810	24,912	23,108	24,244
Travelling expenses of Members and others	9,379	11,996	12,262	29,300	20,200
Insurance	342	342	342	342	342
Electoral Office	60,677	70,200	72,816	78,706	74,401
Election expenses	98,110	3,037	5,201	89,808	721
Administration of Electoral Act ..	33,859	28,477	42,548	44,703	25,576
Miscellaneous	4,256	12,939	2,718	2,550	3,976
Total	348,415	323,359	346,192	446,464	336,012

In section 66 of the Constitution, provision is made for payment out of the Consolidated Revenue Fund of the Commonwealth, for the salaries of Ministers of State, of an annual sum which, until Parliament otherwise provides, shall not exceed £12,000. This was modified in 1915-16, when the Minister of the Navy was given separate Cabinet rank. Allowances to senators and members of the House of Representatives are also provided for in the Constitution, section 48 of which specifies that until Parliament otherwise provides, each such allowance shall consist of £400 a year reckoned from the day on which the member takes his seat. During the second session of the Parliament in 1907 an Act was passed raising the annual allowance from £400 to £600, such increase to date from 1st July, 1907. In 1920, the salaries of members of both Houses were further increased to £1,000 per annum.

(c) *Prime Minister's Department.* This department was created during the financial year 1911-12. In addition to the Prime Minister's Office it includes the Audit Office taken from the Treasury, the Executive Council taken from the External Affairs Department, the Public Service Commissioner's Office (now the Public Service Board's Office) taken from the Home Affairs Department, and Commonwealth Shipbuilding. In 1916-17 it assumed control of the High Commissioner's Office in London, which was detached from the old External Affairs Department when the latter was merged in the Home and Territories Department. It has recently enlarged its activities by administering the affairs of the Mandated Territory of Nauru. The expenditure for the last five years is shown in the following table :—

EXPENDITURE.—PRIME MINISTER'S DEPARTMENT, 1919-20 TO 1923-24.

Details.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
	£	£	£	£	£
Salaries, contingencies, etc.	29,125	32,876	38,191	38,896	34,800
Executive Council	210	250	165	..	..
Audit Office	27,745	32,211	34,689	34,754	35,382
Rent, repairs, etc.	6,997	7,214	9,021	7,710	10,348
Public Service Board's Office	26,757	30,546	34,960	33,745	47,491
High Commissioner's Office, London ..	66,037	75,764	69,417	59,024	54,508
Australian Commissioner's Office, New York	15,727	12,215	9,353	6,466	11,489
Interest on Commonwealth Securities ..	27,464	21,620	204,316	439,054	464,071
Sinking Fund on Commonwealth Securities	2,433	433	550	31,013	48,967
Mail Service to Pacific Islands	21,600	43,501	49,167	46,805	52,953
Contribution to Secretariat, League of Nations .. ..	..	68,350	40,984	37,470	34,620
Immigration .. ..	..	..	72,175	69,560	66,866
Interest on Transferred Properties ..	..	..	30,370	30,370	29,480
Miscellaneous	88,313	109,959	140,170	73,660	203,686
Total	312,408	434,939	733,528	908,527	1,094,661

The "Miscellaneous" vote for 1919-20 included £32,979 as a grant for the relief of distress caused by the maritime strike; £17,301 for the expenses incurred during the visit of the Prince of Wales; £10,994 for the Basic Wage Commission; and £10,000 as a reward to Sir Ross Smith. In 1920-21 the largest single item was one of £50,371, representing the balance of the expenses of the visit of the Prince of Wales. The remaining items included £10,881 for Basic Wage Commission; £5,418 for Conferences on Coal Industry disputes; £5,802 for Commonwealth representation at Geneva Conference; and £4,000 for Imperial Mineral Resources Bureau Grant. In 1921-22 it included £49,070 for relief of distress in Europe, and £32,500 as payment to the South African Government on account of wheat. The agreement with the Amalgamated Wireless Limited for the upkeep of Coastal Stations accounted for £47,330 of the "Miscellaneous" vote in 1922-23. In 1923-24 this item was debited with £137,697, payment to Central Wool Committee in respect of wool supplied for the local manufacture of wool-tops, and £14,109, British Empire Exhibition.

(d) *Attorney-General's Department.* The extra expenditure connected with this Department of late years has been caused in large measure by the extension of the Federal High Court, and an increase in the item "Patents, Trade Marks, etc." Details for the five years 1919-20 to 1923-24 are furnished hereunder :—

EXPENDITURE.—ATTORNEY-GENERAL'S DEPARTMENT, 1919-20 TO 1923-24.

Details.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
	£	£	£	£	£
Attorney-General's Office	14,492	15,558	18,358	20,010	17,949
Crown Solicitor's Office	16,042	17,879	18,248	18,829	19,478
Salaries of Justices of High Court ..	22,448	21,556	21,500	21,500	21,500
High Court expenses	11,922	12,925	12,276	13,957	14,104
Court of Conciliation and Arbitration ..	7,650	9,112	4,949	11,182	8,378
Rent, repairs, etc.	4,733	5,889	8,200	12,797	11,081
Patents, Trade Marks, etc.	32,321	42,389	43,602	43,973	42,935
Investigation Branch .. ..	..	4,244	7,496	7,904	8,905
Public Service Arbitrator's Office ..	..	1,036	4,524	3,604	3,955
Miscellaneous	1,399	1,858	8,892	9,041	13,851
Total	111,007	132,446	148,045	162,797	162,136

(e) *Treasurer's Department.* The sub-departments under the control of the Commonwealth Treasurer are the Treasury, the Pensions Department, the Taxation Office, the Supply and Tender Board, and Superannuation. Details of the expenditure of this Department for the last five years are given in the following table :—

EXPENDITURE.—TREASURER'S DEPARTMENT, 1919-20 TO 1923-24.

Details.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
	£	£	£	£	£
Treasury	48,393	61,139	56,084	50,698	51,007
Taxation Office	375,710	513,422	592,149	576,424	516,887
Pensions Office	73,509	85,016	88,687	84,535	88,405
Maternity Allowance Office	12,708	15,902	15,143	15,764	14,512
Coinage	18,956	33,981	50,785	31,979	16,273
Rent, Repairs, etc.	25,676	28,090	33,002	29,426	22,993
Interest on Commonwealth Securities .. ..	..	41,223	..	..	..
Miscellaneous	29,132	34,277	77,693	(b) 279,508	130,347
Departmental Expenditure	584,084	813,050	913,543	1,068,334	840,424
Invalid and Old-age Pensions (a)	4,546,880	5,074,336	5,290,056	5,337,936	6,426,752
Maternity Allowance	625,865	700,760	690,700	688,435	670,175
Maintenance of persons in charitable institutions	72,675	75,905	89,978	86,080	97,129
Total	5,829,504	6,664,051	6,984,277	7,180,785	8,034,480

(a) Including the following amounts spent from Trust Funds :—In 1919-20, £3,350,425; in 1920-21, £2,900,000; in 1921-22, £4,417,704; in 1922-23, £3,204,212; and in 1923-24, £3,714,287. (b) Including Taxation Officers' Compensation, £200,000.

The increase in the departmental expenditure is largely on account of the Taxation Office. During 1923-24, however, expenditure under this item decreased by £59,537. The "Miscellaneous" vote for 1921-22 included a loan of £25,000 to the Returned Soldiers' Woollen Company, and £11,034 for the Royal Commission on Taxation. For 1922-23 it included a loan of £25,000 to the Returned Soldiers' Woollen Company and £200,000 Taxation Officers' Compensation. In 1923-24, it included £60,000, donation to Japanese Earthquake Fund, a loan of £21,000 to the Port Huon Fruit Growers' Association, and £10,000 to the Returned Soldiers' Woollen Company.

(f) *Trade and Customs.* Under this head have been included the expenditure of all the sub-departments under the control of the Minister of Trade and Customs, as well as the amounts payable as sugar and other bounties, and the expenses in connexion therewith. The administration of Patents, Trade Marks, and Copyright is now entrusted to the Attorney-General's Department, and that of Quarantine to the new Department of Health. Particulars for the five years 1919-20 to 1923-24 are given in the following table:—

EXPENDITURE.—TRADE AND CUSTOMS DEPARTMENT, 1919-20 TO 1923-24.

Details.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
	£	£	£	£	£
Chief Office	37,362	43,861	68,677	70,037	72,238
Customs (ordinary)	399,534	460,187	477,666	439,462	503,150
Navigation	1,479	8,100	18,188	25,426	39,927
Analyst	5,637	5,663	5,794	5,829	6,039
Audit (proportion)	5,538	7,940	6,869	9,371	10,970
Quarantine	100,030	100,583	..	..	..
Pensions and retiring allowances ..	17,186	16,803	16,946	18,736	20,365
Rents, repairs, etc.	20,933	24,386	23,089	21,445	22,616
Sugar and other bounties	16,292	24,406	29,793	192,114	455,859
Inter-State Commission	10,545	3,650	..	..	..
Lighthouses	147,349	168,314	160,518	162,946	169,045
Interest on transferred properties ..	77,795	71,469	42,497	47,162	49,541
Interest on Commonwealth securities ..	3,267	3,501	1,741	4,943	8,180
Bureau of Commerce and Industry ..	3,774	5,160	5,000	4,659	3,484
Institute of Science and Industry ..	13,109	16,042	17,201	22,591	22,679
Miscellaneous	132,312	4,928	15,242	1,219,088	243,725
Total	992,142	964,993	889,121	2,243,809	1,627,818

The large "Miscellaneous" vote in 1919-20 is due to an item of £130,036 paid to the Australian Wheat Board as profit on cornsacks, while that in 1922-23 includes Loans for purchase of Wire Netting, £250,000, and Losses and Advances on Fruit Pools, £863,000. In 1923-24, it included an amount of £141,262, British Empire Exhibition.

(g) *Defence.* The expenditure in connexion with Defence, which in 1901-2 amounted to £861,218, had by 1923-24 grown to £3,852,531. Expenditure on the Air Service is included for the first time in 1920-21. Particulars for the last five years are as follows:—

EXPENDITURE.—DEFENCE, COMMONWEALTH, 1919-20 TO 1923-24.

Details.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
	£	£	£	£	£
Chief Office	108,429	125,491	150,384	89,732	96,645
Military	914,089	1,276,531	1,386,042	1,208,005	1,289,171
Naval	1,562,029	2,367,748	2,198,268	1,942,227	1,916,384
Air Services .. ..	..	62,888	155,282	179,337	222,657
Audit (proportion)	16,104	17,298	15,032	14,374	17,169
Pensions and retiring allowances	1,202	2,162	2,633	2,921	2,899
Rents, Repairs, etc.	78,461	108,728	107,312	92,894	107,871
Interest on transferred properties	130,471	122,325	93,586	97,112	94,459
Interest on Commonwealth securities	71,005	71,433	18,776	84,756	79,823
Miscellaneous	30,849	30,115	328,883	74,224	25,453
Total	2,912,639	4,184,719	4,456,198	3,785,582	3,852,531

The large sum under "Miscellaneous" for 1921-22 includes £300,000 for compensation under the Defence Retirement Act.

(h) *Postmaster-General's Department.* Details of the expenditure of this Department for the last five years are given in the table hereunder :—

EXPENDITURE.—POSTAL DEPARTMENT, 1919-20 TO 1923-24.

Details.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
	£	£	£	£	£
Chief Office	25,842	30,949	33,954	37,800	46,685
Postal Department (ordinary)	5,681,340	6,844,979	7,722,459	7,556,391	8,121,381
Audit (proportion) ..	6,224	8,182	8,927	10,293	10,663
Pensions and retiring allowances	67,842	75,057	81,171	84,057	92,436
Rents, repairs, etc. ..	62,415	86,824	101,047	123,405	138,092
Interest on transferred properties	214,815	186,070	186,752	193,103	198,699
Interest on Commonwealth Securities	52,832	49,562	19,516	90,421	353,387
Sinking Fund on Commonwealth Securities ..	16,271	16,193	16,193	23,218	197,552
Miscellaneous	9,339	7,427	18,667	123,337	114,599
Total	6,136,920	7,305,243	8,188,686	8,242,025	9,273,494

The "Miscellaneous" item for 1922-23 includes £47,330 for upkeep of coastal wireless stations, and for 1923-24, £59,560 for compensation to officers retired compulsorily, and £28,999 for Superannuation.

(i) *Home and Territories.* Under this Department, created in the financial year 1916-17, is placed the bulk of the old External Affairs Department (after the removal of the London office), the Census and Statistics and Meteorological Offices taken from the old Home Affairs Department, and the Mandated Territory of New Guinea. The Darwin-Katherine River Railway is administered by the Works and Railways Department.

EXPENDITURE.—HOME AND TERRITORIES DEPARTMENT, 1919-20 TO 1923-24.

Details.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
	£	£	£	£	£
Chief Office	18,528	21,756	21,594	21,141	24,544
Census and Statistics	16,795	17,713	18,936	20,438	19,575
Meteorological Branch	29,706	84,923	88,932	80,911	39,245
Lands and Survey	17,280	22,236	22,226	15,124	12,354
Papua	51,492	62,656	179,245	80,894	79,139
Rents, repairs, etc.	13,207	16,380	15,941	23,128	22,615
Northern Territory	186,782	232,011	193,950	195,886	212,469
Federal Capital Territory ..	25,482	26,828	32,741	..	..
Norfolk Island	3,000	3,000	3,000	3,500	3,500
Interest on Commonwealth Securities (a)	91,572	54,032	34,280	46,843	68,226
Sinking Fund, Commonwealth Securities (a)	5,853	2,612	2,535	4,346	7,711
Miscellaneous	18,584	202,422	82,328	33,822	33,262
Total	478,281	746,569	695,708	526,033	522,640

(a) Includes Northern Territory.

The large "Miscellaneous" item in 1920-21 includes £149,150 special expenditure on the Census of 1921.

(j) *Works and Railways Department.* The extension of Commonwealth Works and Railways led, in 1916-17, to the separation of these branches from the former Home Affairs Department and the constitution of a separate Department which also administers the railways which were formerly under the control of the former External Affairs Department. The expenditure for the last five years was as follows:—

EXPENDITURE.—WORKS AND RAILWAYS DEPARTMENT, 1919-20 TO 1923-24.

Details.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
	£	£	£	£	£
Chief Office	39,770	45,317	31,724	32,939	34,274
Kalgoorlie-Port Augusta Railway	264,798	292,168	255,776	249,289	265,293
Port Augusta-Oodnadatta Railway, and Northern Territory Railways	159,456	156,900	180,034	183,293	188,441
Interest on transferred properties	403	374	374	..	..
Interest on Commonwealth Securities	232,948	174,002	100,408	127,717	135,085
Sinking Fund on Commonwealth Securities	11,957	13,200	13,200	16,178	15,007
Rent, repairs, etc.	3,286	4,670	4,544	5,526	4,928
Royal Commission—Unification of Gauge .. .. .	..	6,287	9,229	449	560
Main Roads Development .. ..	..	..	..	500,000	..
Miscellaneous	1,578	5,474	14,038	11,915	25,743
Total	714,196	698,392	609,327	1,127,306	669,331

(k) *Health Department.* This department came into existence in the financial year 1921-22. Details of expenditure are as follow:—

EXPENDITURE.—HEALTH DEPARTMENT, 1921-22 TO 1923-24.

Details.	1921-22.	1922-23.	1923-24.
	£	£	£
Central Administration	9,601	8,486	9,898
Salaries, Contingencies, etc.	134,934	114,429	125,186
Interest on Treasury Bills	87	965	1,804
Interest on Transferred Properties	6,909	7,979	7,466
Rent and Repairs	10,065	14,858	15,292
Miscellaneous	10,631	9,195	8,271
Total	172,227	155,912	167,917

(iii) *Miscellaneous.* (a) *New Works.* Particulars of the expenditure on new works, etc., during the last five years are given in the following table:—

EXPENDITURE ON NEW WORKS, 1919-20 TO 1923-24.

Department.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
	£	£	£	£	£
Parliament .. ..	..	700	2,086	..	..
Prime Minister .. ..	..	1,653	1,029	143	31,250
Treasury	1	5,832	54,242	..	..
Trade and Customs	12,104	28,103	7,249	3,609	1,675
Defence	116,663	1,097,062	1,507,758	460,734	311,323
Postmaster-General	184,788	940,917	940,114	221,709	240,026
Home and Territories	21,439	23,564	31,463	13,885	15,282
Works and Railways	159	372	109	..	..
Health .. ..	..	..	27,744	20,847	21,104
Total	335,154	2,098,203	2,571,794	720,927	620,660

(b) *War Services.* Full details concerning the expenditure from Consolidated Revenue upon War and Repatriation will be found in a later sub-section.

(c) *Interest—State Loans Act.* The amount of £945,850 is the interest on the sum of £17,787,460 borrowed by the Commonwealth in London and advanced to the States (except New South Wales). Of this amount £5,037,460 carried interest at 5 per cent., and £12,750,000 at 5½ per cent.

Division IV.—Subsidy Paid to States.

1. *Payments to the Several States.*—The following table furnishes particulars of the subsidies paid to the States on account of each of the financial years 1919-20 to 1923-24:—

COMMONWEALTH SUBSIDY PAID TO STATES, 1919-20 TO 1923-24.

State.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
	£	£	£	£	£
New South Wales	2,472,717	2,533,234	2,632,036	2,690,198	2,738,725
Victoria	1,847,085	1,878,449	1,918,967	1,969,772	2,014,746
Queensland	895,454	912,628	952,728	978,673	1,005,486
South Australia	578,094	588,603	621,862	635,833	650,453
Western Australia	569,512	564,735	554,704	554,828	558,573
Tasmania	357,630	362,514	355,238	356,247	356,555
Total	6,720,492	6,840,163	7,035,535	7,185,551	7,324,538

The amounts of subsidy given in the table are based upon an annual payment of £1 5s. per capita, with special concessions to Western Australia and Tasmania, and are in accordance with the provisions of the "Commonwealth Surplus Revenue Act" passed in 1910 which came into effect on the 1st July of that year for a period of ten years, subject to revision on the expiration thereof. This period expired on the 30th June, 1920, and it was then possible for Parliament to extend the Act for a further period, or to enter into new financial relations with the States. The "per capita" payment has been continued provisionally up to the present time.

§ 3. Trust Fund and Miscellaneous.

1. **Trust Accounts.**—The Trust Fund balances on 30th June, 1924, totalled £14,323,001, as compared with £17,569,701 for the corresponding date in the year ending 30th June, 1923. Details concerning the most important trust accounts are contained in the following table :—

COMMONWEALTH TRUST FUND AT 30th JUNE, 1924.

Trust Accounts.	Balance at 30th June, 1924.	Trust Accounts.	Balance at 30th June, 1924.
	£		£
Admiralty	49,617	National Debt Sinking Fund	2,059,372
Australian Notes and Bond Printing	56,000	New Guinea Agency	10,587
Australian Soldiers' Repatriation	60,623	Northern Territory	13,115
Australian Soldiers' Repatriation Con- tribution	121,079	Other Trust Moneys	976,162
Australian War Records Publications	19,151	Public Trustee	225,186
Canned Fruit Bounty	80,000	Railway Plant and Stores Suspense	75,984
Cockatoo Island Dockyard	25,621	Railway Provision Stores	13,605
Commonwealth Government Ships	91,661	State Loans Expenses Suspense	40,797
Defence—Clothing Material	60,070	Superannuation Fund	492,329
Naval Construction	2,000,000	Suspense	19,316
Reserve	499,044	Taxation Officers' Compensation	172,678
Small Arms	30,240	Treaty of Peace—Clearing Office Account	7,826
Small Arms Ammunition	196,683	Liquidation Account	226,549
Stores London Liabilities	690,303	Unclaimed Militia Pay	19,123
Deferred Pay	382,938	War Loan Securities Repurchase	918,163
General Average Deposits	11,767	War Pensions	867,992
Insurance—Lost Enemy Vessels	30,091	War Savings Certificates Interest	207,457
International Postal and Money Order ..	50,649	War Service Homes Insurance	58,805
Invalid and Old-age Pensions	1,732,011	Williamstown Dockyard	25,042
Loans—Wire Netting	219,000	Miscellaneous	38,939
London Loans Expense Suspense	358,482		
Main Roads Development	367,544	Total	14,323,001
Money Order	721,500		

2. **London Flotations on behalf of States.**—Act No. 17 of 1916 authorized the Treasurer to borrow £8,940,000 in the United Kingdom, and Act No. 16 of 1917 to raise £8,000,000, also to lend the amount to the several States, other than New South Wales, and, pending the borrowing of the money, to advance the amounts set forth in the Acts out of loans made by the Government of the United Kingdom to the Commonwealth. In pursuance of these Acts, £16,907,287 was distributed to the States up to 30th June, 1924. The money was allocated as follows :—

COMMONWEALTH LOANS RAISED IN LONDON ON BEHALF OF STATES AS AT 30th JUNE, 1924.

State.	Amount.
	£
Victoria	1,980,902
Queensland	5,515,269
South Australia	4,139,812
Western Australia	4,196,026
Tasmania	1,075,278
Total	16,907,287

In addition to these amounts, the Commonwealth Government has made further advances to the States for various purposes which are set out as follows, the amounts representing what was outstanding at 30th June, 1924 :—

ADVANCES TO STATES AT 30th JUNE, 1924.

Advances to—	Amounts.	Total.
	£	£
Government of New South Wales—		
Settling returned soldiers	9,806,057	
Silos for wheat storage	500,000	10,306,057
Government of Victoria—		
Settling returned soldiers	11,794,075	
Providing employment	92,000	
Advances for Immigration	130,173	12,016,248
Government of Queensland—		
Settling returned soldiers	2,762,337	
Providing employment	400,000	
Forestry	71,132	
Advances for Public Works	1,250,000	4,483,469
Government of South Australia—		
Settling returned soldiers	2,833,005	
Providing employment	28,796	2,861,801
Government of Western Australia—		
Settling returned soldiers	5,431,202	
Advances for Immigration	750,000	
Advances for Public Works	500,000	6,681,202
Government of Tasmania—		
Settling returned soldiers	2,129,563	2,129,563
Total		38,478,340

3. Surplus Revenue.—Until the end of 1906-7, the balance of the Consolidated Revenue Fund was paid to the States. From 1907-8 until the abolition of the book-keeping provisions of the Constitution, the States received only three-fourths of the net Customs and Excise Revenue, and the balance of the Consolidated Revenue Fund was transferred to the Invalid and Old-age Pensions Trust Account and the Naval Defence Trust Account to provide for expenditure in subsequent years. A statement of surpluses and deficiencies for the past five years is appended hereto.

COMMONWEALTH SURPLUS REVENUE, 1919-20 TO 1923-24.

Year.	Surplus.	Deficiency.	Accumulated Surplus at end of Year.
	£	£	£
1919-20	2,201,749	..	5,724,806
1920-21	893,521	..	6,618,327
1921-22 .. ..	..	209,903	6,408,424
1922-23	1,020,150	..	7,428,574
1923-24	2,587,184	..	(a) 10,015,758

(a) Of this sum £4,915,755 was used in debt redemption and £5,100,003 transferred to Trust Funds.

§ 4. Commonwealth Loan Funds and Public Debt.

1. General.—Although it was not until 1915 that the Federal Government came into the loan market as a borrower, there had previously existed a Commonwealth Public Debt which included several items, such as the balance of the debt taken over from South

Australia and the money owing to the States for transferred properties. The debt still includes the items mentioned, in addition to the General Loan Fund, the loans for military purposes, etc. In view of the large expansion of the Public Debt, and its present importance in Commonwealth public finance, the different items are treated seriatim in the following sub-sections.

2. Loans taken over from South Australia.—The first portions of the debt were contracted at the beginning of 1911, when the Commonwealth assumed responsibility for the payment of interest on transferred properties (further dealt with in sub-section 4) and also for the administration and the liabilities of the Northern Territory and the Port Augusta-Oodnadatta Railway. At 30th June, 1911, the debt on account of the former was £3,657,836, and on account of the latter, £2,274,486—a total of £5,932,322. As the securities fall in they are redeemed by the Commonwealth Government, the money required being taken from the Loan Fund. The item is thus constantly diminishing, and on 30th June, 1924, stood at £3,879,151, of which £2,208,719 was on account of the Northern Territory, and £1,670,432 on account of the railway.

3. Loan Fund for Public Works, etc.—Up to 1911 the Commonwealth Government had met its Public Works expenditure out of revenue. In that year, however, in view of the heavy prospective cost of the Transcontinental Railway and the Federal Capital Territory, it was decided to institute a Loan Fund similar to those of the States. The initiation of this Fund was greatly assisted by the fact that the Treasury at that time held a large quantity of gold, principally on behalf of the Australian Notes Account. Up to 30th June, 1914, the money required for loan expenditure was obtained mainly from this source at 3½ per cent., and inscribed stock of an equivalent value was created. Since the outbreak of war, the money required for the Loan Fund has been mainly obtained by the issue of Treasury Bills. The details of the expenditure for the last five years are given in the following table:—

COMMONWEALTH LOAN EXPENDITURE FOR WORKS, 1919 TO 1924.

Particulars.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
	£	£	£	£	£
Railways Construction—					
Trans-Australian Railway	138,164	76,009	69,072	82,500	62,506
Northern Territory	2,539	1,654	6,436	7,651	20,420
Other	91c	4,258	8,946	12,997	33,355
Loan Redemption—					
Northern Territory .. ..	..	223,814	..	..	..
Papua—Railways and Wharves .. ..	..	20,000	15,700	47,720	..
Posts and Telegraphs—					
Purchase of land	596c	920	7,706	138,875	47,348
Construction of conduits, etc. ..	305,538	9c	795,085	2,059,523	3,855,673
Acquisition of land (a)—					
London	58,611	55,727	18,651	6,921	4,395
Perth	23,073	21,644	45,000	90,239	..
Federal Capital Territory	11,968	83,232	148,425	354,041	499,349
Elsewhere (b)	37,375	5,474	32,757	4,968	19,220
Defence Machinery; Dockyards, Cockatoo Island; Naval Bases, etc.	282,044	305,721	159,769	43,566	66,089
Ship Construction .. ..	..	2,999,630	3,369,118	1,815,713	629,646
General Arsenal; Small Arms, etc.; Cordite	350,616	153,083	181,095	27,525	91,796
Lighthouses	26,795	29,746	14,556	10,400	26,285
Contribution under River Murray Waters Act	39,241	56,722	112,372	176,921	235,609
Acetate of Lime Factory .. ..	..	2,420	..	..	..
Wireless Telegraphy	11,509	..	..	..	62,500
Immigration .. ..	..	..	133,848	199,483	203,744
Construction of Roads .. ..	..	..	..	217,944	31,788
Subscription to Capital of Oil Refining Company .. ..	..	25,000	75,000	50,000	100,000
Miscellaneous .. ..	..	36,681	52,967	36,962	82,175
Total	1,286,786	4,101,726	5,246,503d	5,383,949e	6,068,895

(a) Including cost of erection of buildings. (b) Excluding purchases for Posts and Telegraphs. (c) Credited by repayment. (d) In addition, £7,007,107 was carried to General Loan Fund Redemption Account from which £6,185,028 was spent in redeeming Treasury Bills. (e) In addition, £243,135 was spent in redeeming Treasury Bills, and £4,000,000 for redemption of loans raised in London for the States.

4. **Properties Transferred from States.**—At the time of Federation, when the Commonwealth took over the control of a great many departments which had previously been administered by the States, a large amount of property was handed over to the Commonwealth Government. A valuation was made, with results set out in detail in Official Year Book No. 14, page 694, and the Commonwealth now pays interest to the States on account of all the transferred properties.

Since the valuation some transfers and retransfers have been made. The estimated value of the transferred properties for the last five years is given in the table in sub-section 7 hereinafter.

5. **War Loan from the Imperial Government.**—On the outbreak of the European war in 1914, the Commonwealth Government obtained a loan from the Imperial Government for the purpose of financing the prospective large military expenditure. At first, the arrangement was that the Imperial Government should advance the sum of £18,000,000 in twelve monthly instalments of £1,500,000 each. It was soon found, however, that this would be insufficient, and the Imperial Government made a fresh advance of £6,500,000, also to be paid in monthly instalments. A third loan of £25,000,000 was subsequently negotiated, of which £12,000,000 was received by 30th June, 1916, and £11,000,000 in 1916-17. In addition to this capital indebtedness, a further sum of £42,696,500 was due to the British Government for the maintenance of Australian troops.

The last item of nearly £43,000,000 remained unfunded until early in 1921. An arrangement was then concluded with the Imperial Government, by means of which almost the entire debt (nearly £92,500,000) was consolidated. The Commonwealth Government undertook to extinguish the debt by annual payments of approximately £5,550,000, spread over about 35 years, the payment representing 6 per cent. of the original debt. This provides for interest at nearly 5 per cent., and a sinking fund of a little more than 1 per cent., and may be regarded as a very satisfactory arrangement for the Commonwealth, since it entails only a moderate rate of interest, and provides for the ultimate extinction of nearly one-fourth of the National War Debt. The amount outstanding on 30th June, 1924, was £89,270,922, which will diminish steadily year by year owing to the operation of the sinking fund.

6. **Flotation of War Loans in Australia.**—In addition to the advances from the Imperial Government, the Commonwealth Government has raised large amounts of money for the prosecution of the war by direct application to the investing public of Australia.

Full details of the seven War Loans and the first Peace Loan are given in Official Year Book No. 14. In the financial year 1920-21 a second Peace Loan was floated with a currency of 10½ years and a rate of interest of 6 per cent. In the financial year 1921-22 a third Peace Loan was floated with a currency of 9½ years and a rate of interest of 6 per cent. It was issued at 96 and matures with the second Peace Loan on the 15th December, 1930. Totals for the ten issues are given in the tables hereunder. The first table refers to the gross total :—

COMMONWEALTH WAR LOANS LOCALLY RAISED.—TOTAL TO 30th JUNE, 1924.

Local Loans.	Number of Subscribers.			Amount Subscribed.		
	Inscribed Stock.	Treasury Bonds.	Total.	Inscribed Stock.	Treasury Bonds.	Total.
	No.	No.	No.	£	£	£
Total	123,683	710,069	833,752	132,601,940	117,570,500	250,172,440

The gross proceeds amounted to £249,768,962. The next table shows the net proceeds of the loans.

COMMONWEALTH WAR LOANS LOCALLY RAISED.—NET PROCEEDS TO 30th JUNE, 1924.

Local Loans.	Deductions.			Net Proceeds of Loan.
	Accrued Interest.	Flotation Expenses.	Total.	
	£	£	£	£
Total	2,786,747	762,153	3,548,900	246,220,062

7. **Commonwealth Public Debt.**—(i) *Total Debt.* Separate consideration has already been given to the items composing the Public Debt. The table appended shows the debt of the Commonwealth (apart from the States) at yearly intervals since 1920.

COMMONWEALTH PUBLIC DEBT AS AT 30th JUNE, 1920 TO 1924.

Details.	1920.	1921.	1922.	1923.	1924.
	£	£	£	£	£
Balance of loans taken over from South Australia—					
(a) On account of Northern Territory	2,433,108	2,209,294	2,209,294	2,209,169	2,208,719
(b) On account of Oodnadatta railway	1,759,003	1,759,003	1,742,452	1,693,745	1,670,432
Value of properties transferred by States	11,440,462	11,536,139	11,186,169	11,042,987	10,860,591
Inscribed Stock	4,580,000	8,764,716	23,764,716	23,764,716	36,227,255
Treasury Bills	9,815,600	8,094,153	2,843,125	2,843,125	5,021,545
War Loan from British Government ..	49,082,059	92,480,156	91,453,288	90,388,604	89,270,922
Commonwealth Internal Loans	207,184,380	232,819,660	241,879,840	241,746,090	249,751,997
Accrued Deferred Pay, A.I.F.	260,000	14,720			
Loans raised on behalf of States	16,750,000	16,750,000	16,750,000	16,750,000	17,787,461
Gratuities	30,000,000	25,279,925	23,088,153	19,508,481	700,900
Miscellaneous	48,005,293	2,012,258	1,153,472	1,049,399	2,100,277
Total	381,309,905	401,720,024	416,070,509	410,996,316	415,600,099
Commonwealth Debt <i>per capita</i> ..	£71 19 0	£73 12 9	£74 14 6	£72 5 2	£71 12 3

It will be noticed that up to 1923 the amount of the Commonwealth Internal Loans falls somewhat short of the totals of the ten issues in the table immediately preceding the above. This is owing to the fact that stock to a considerable amount has been presented as payment of Estate Duty, and cancelled, the payments being accepted in accordance with the provisions of section 5 of the Commonwealth Inscribed Stock Act 1915. The increase in 1923–24 was due to the issue of a conversion loan to provide for the redemption or conversion of War Loan and War Gratuities falling due this year.

(ii) *Place of Flotation.* The loans taken over from South Australia, which constituted the first portion of the Federal Public Debt, included both London and Australian securities. The presence in the Treasury of a large holding of gold, and the moderate rate of interest ruling on gilt-edged securities, made the conditions in 1911 and for some little time afterwards very favourable for the flotation of local loans. London securities were redeemed as they fell due, and replaced by the 3½ per cent. stock of the Loan Fund. Consequently, up to 1914 the amount of the securities repayable in London fell steadily, and the amount repayable in Australia rose rapidly. In 1915 the military loan from the Imperial Government caused a sharp rise in the amount of the securities repayable in London, which was maintained in the two following years. This was, however, more than offset by the flotation of the local war loans. The appended table gives particulars

of Commonwealth loans which have been floated in London and Australia respectively during the last five years. A separate column is devoted to the cost of the transferred properties, which, for obvious reasons, it is impossible to allocate.

COMMONWEALTH PUBLIC DEBT.—PLACE OF FLOTATION, 1920 TO 1924.

At 30th June—	Payable in—		Value of Transferred Properties.	Total.
	London.	Australia.		
	£	£	£	£
1920	111,680,602	258,188,841	11,440,462	381,309,905
1921	117,322,199	272,861,686	11,536,139	401,720,024
1922	131,278,780	273,605,560	11,186,169	416,070,509
1923	126,165,389	273,787,939	11,042,988	410,996,316
1924	142,524,394	262,215,114	10,860,591	415,600,099

(iii) *Amount of Debt at Various Rates of Interest.* When the first debt was taken over from South Australia, it consisted mainly of securities varying from 3 per cent. to 4 per cent., the average rate of interest for the first year being £3 12s. 4d. For the first three years the increase in the debt was due almost entirely to the expansion of the 3½ per cent. stock of the Loan Fund, consequently the average rate of interest fell steadily, until on 30th June, 1914, it stood at £3 11s. 10d. Then came the loans for military purposes, and the fall in the average rate was ultimately converted into a rise which was steadily maintained until at 30th June, 1922, the average rate stood at £4 19s. 9d. At the 30th June, 1923, however, the average rate had fallen to £4 19s. 3d. per cent., but by the 30th June, 1924, it had risen to £5 0s. 1d. per cent.

The accompanying table gives particulars of rates of interest for the five financial years ended 30th June, 1924 :—

COMMONWEALTH PUBLIC DEBT.—RATES OF INTEREST, 1920 TO 1924.

Rates of Interest.	At 30th June—				
	1920.	1921.	1922.	1923.	1924.
%	£	£	£	£	£
3	35,063	35,063	35,063	35,060	35,063
3½	17,455,377	15,469,528	15,119,558	14,976,377	14,793,980
£3/12/3 ..	720,411	720,411	703,860	655,153	631,840
3¾	1,054,600	833,870	833,870	833,745	833,295
4	12,025,880	8,304,433	5,053,405	9,053,405	5,504,903
4½	192,130,633	126,769,038	122,093,692	120,835,510	116,908,700
£4/18/4 ..	..	92,480,156	91,453,288	90,388,604	89,270,922
5	111,137,941	64,576,210	61,280,220	67,298,328	82,400,498
5½	34,000,000	29,279,925	27,088,153	19,508,481	700,900
5¾	12,750,000	12,750,000	12,750,000	12,750,000	12,750,000
6 .. ..	..	2,000,000	..	..	..
Overdue ..	..	48,501,390	79,659,400	74,661,653	91,578,657
	..	..	..	..	191,341
Total ..	381,309,905	401,720,024	416,070,509	410,996,316	415,600,099
Average rate of interest ..	£4/13/7	£4/17/11	£4/19/9	£4/19/3	£5/0/1

(iv) *Amount of Interest Payable.* A table is appended showing the amounts payable as interest on the Commonwealth Public Debt as at 30th June in the years 1920 to 1924 inclusive. The rapid increase is due not only to the great expansion of the War Loan Fund, but also to the high rate of interest on recent loans.

COMMONWEALTH PUBLIC DEBT.—INTEREST PAYABLE IN LONDON AND AUSTRALIA, AS AT 30th JUNE.

30th June—				Payable in—			Total.
				London.	Australia.		
					Loans.	Transferred Properties.	
				£	£	£	£
1920	..	..	..	5,546,055	12,105,372	400,416	18,051,843
1921	..	..	..	5,993,884	13,281,175	403,765	19,678,824
1922	..	..	..	6,677,781	13,630,843	391,516	20,700,140
1923	..	..	..	6,413,668	13,591,968	386,505	20,392,141
1924	..	..	..	7,248,400	13,131,877	380,121	20,760,398

(v) *Dates of Maturity.* The dates of maturity of the several portions of the Commonwealth debt are shown hereunder. The Commonwealth Government has refrained from issuing interminable stock, although as regards about 6 per cent of the debt no definite date of maturity had been assigned on 30th June, 1924. It will be noticed that about £190,000,000 falls due in the space of five years 1924 to 1928, the bulk of this being represented by the balance of the first eight internal loans.

COMMONWEALTH PUBLIC DEBT.—DUE DATES OF AMOUNTS OUTSTANDING ON 30th JUNE, 1924.(a)

Due Dates.				Amounts.	Due Dates.				Amounts.
				£					£
1924	..	..	..	228,972	1937	..	..	..	1,200
1925	..	..	..	68,823,750	1938	..	..	..	18,377
1926	..	..	..	6,005,264	1939	..	..	..	151,448
1927	..	..	..	89,956,750	1941	..	..	..	15,000,000
1928	..	..	..	25,130,590	1945	..	..	..	22,500,000
1929	..	..	..	2,817,903	1948	..	..	..	10,577,290
1930	..	..	..	60,368,820	1972	..	..	..	3,764,716
1933	..	..	..	39,387	Indefinite	..	..	..	15,439,873
1934	..	..	..	4,465,439	Annual Repayments	..	..	..	89,270,922
1935	..	..	..	46,342					
1936	..	..	..	993,056	Total	..	..	..	415,600,099

(a) Those loans in the case of which the Government has the option of redemption during a specified period have been in each case classified according to the latest date of maturity.

The graphs accompanying this chapter illustrate the rise in the revenue, public debt and taxation of the Commonwealth and States since 1902, the year 1901-2 being the first complete financial year since Federation.

(vi) *Sinking Fund.* The Commonwealth Government established a sinking fund against most of the securities which constitute its public debt. Part of the inscribed stock issued for works purposes carried a sinking fund of 5 per cent., and the remainder one of $\frac{1}{2}$ per cent. The internal issues carried sinking funds, partly of $\frac{1}{2}$ per cent., and

partly of 1 per cent. The War Savings Certificates carried a sinking fund of $\frac{1}{2}$ per cent., and the Northern Territory and Port Augusta-Oodnadatta Railway loans one of $\frac{1}{4}$ per cent. These sinking funds were invested partly in Treasury Bills, partly in Commonwealth Inscribed Stock, and partly in Bonds (War Issues).

(vii) *National Debt Sinking Fund.* This fund was created by virtue of the *National Debt Sinking Fund Act 1923*, No. 5 of 1923, which was assented to on the 11th August, 1923. Provision is made therein for the merging of the Loans Sinking Fund, the Northern Territory Sinking Fund, and the Port Augusta Railway Sinking Fund into the National Debt Sinking Fund, the *Loans Sinking Fund Act* of 1918 being repealed. This Act also provides for the payment annually to the Fund of the sum of £1,250,000, for the payment thereto of a sum equal to 10 shillings per cent. of the net debt created, also a sum equal to £5 per cent. of debt redeemed and cancelled by the Commission in pursuance of the Act. In addition, there is to be paid to the Fund repayments of advances from Loan Fund made to States and to Territories under the authority of the Commonwealth; of advances for the erection of wheat silos; of advances under the Nauru Island agreement; of advances for such purposes as are prescribed; of purchase money and repayments of advances under the War Service Homes Act; and unexpended balances of the Loan Fund. The provision as to the payment of £5 per cent. to the Fund does not, however, apply to these repayments, purchase money, and unexpended balances. The Fund also benefits by half the net profits derived by the Commonwealth Bank of Australia on or after the first day of July, 1923, in place of the payment hitherto made to the Bank Redemption Fund.

The National Debt Commission was created for the purpose of taking general control of all Sinking Fund moneys, and of deciding when and how these moneys shall be invested or used for the redemption of the debt. The situation of the Sinking Funds, as at 30th June, 1923, is set out in the accompanying table:—

COMMONWEALTH PUBLIC DEBT.—SINKING FUNDS, 1919 TO 1923.

At 30th June—	Total Accumulation to date.	Total Securities Cancelled to date.	Balance Available.
	£	£	£
1919 ..	3,740,824	1,636,621	2,104,203
1920 ..	5,139,281	2,969,980	2,169,301
1921 ..	8,391,349	7,386,822	1,004,527
1922 ..	10,292,881	9,335,129	957,752
1923 ..	11,756,992	9,606,739	2,150,253

The old Sinking Funds were merged in the National Debt Sinking Fund on 11th August, 1923. The receipts of this fund, including £2,051,588 transferred from the old funds, totalled £5,060,969. Stocks, Bonds, &c., to the value of £3,001,597 were purchased during the period, leaving on 30th June, 1924, a balance on hand of £2,059,372.

The Imperial Government loan comes in a different category from the others, since it is being liquidated by the funding arrangement described in detail on a previous page.

§ 5. Cost of War and Repatriation.

1. *General.*—In view of the importance of the subject, a further reference is here made to the cost of the war. The general policy of the Commonwealth Government has been to pay from Consolidated Revenue all recurring charges for interest, sinking fund, pensions, and other charges consequent upon the war, and part of the expense of repatriation. On the other hand, the whole direct cost of the war and the larger proportion of the cost

of repatriation have been paid from loans. The total cost from both sources to the 30th June, 1924, is set out in the following table :—

COST OF WAR SERVICES TO 30th JUNE, 1924.

Year.	From Revenue. (a)	From War Loan Fund.	Total.
	£	£	£
1914-15	640,218	14,471,117	15,111,335
1915-16	3,778,378	37,423,568	41,201,946
1916-17	8,427,329	53,114,237	61,541,566
1917-18	11,863,251	55,095,109	66,958,360
1918-19	21,255,101	62,192,889	83,447,990
1919-20	24,751,732	45,385,587	70,137,319
1920-21	33,286,233	24,148,501	57,434,734
1921-22	31,337,164	7,576,977	38,914,141
1922-23	30,100,472	1,762,694	31,863,166
1923-24	28,770,106	2,412,015	31,182,121
Total Expenditure ..	194,209,984	303,582,694	497,792,678
Indebtedness to the Government of the United Kingdom for payments made, services rendered, and goods supplied during the war ..			40,188,863
War Gratuity Paid in Cash			26,723,347
Total			564,704,888

(a) Including the amounts spent from Trust Fund War Pensions Account.

2. Expenditure from Revenue.—The following table gives the details of the war expenditure from revenue for the last five years :—

WAR SERVICES EXPENDITURE FROM REVENUE, 1919-20 TO 1923-24.

Heading.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
	£	£	£	£	£
Interest	14,461,902	16,445,068	18,075,693	18,399,978	18,353,553
Sinking Fund	1,312,812	3,168,820	3,000,000	2,401,934	2,225,323
War Pensions	6,032,270	7,389,739	7,028,379	7,134,967	7,169,285
Repatriation of Soldiers and War Service Homes	2,732,346	3,867,707	2,239,754	1,794,105	472,696
Expeditionary Forces	(a)	(a)	200,000	(a)	(a)
Transport Services	(a)	698,052	157,884	(a)	(a)
Loan Conversion Expenses .. .. .	..	..	..	183,635	254,236
Other War Expenditure payable out of Revenue	69,127	(b) 1,716,320	628,842	184,809	265,013
Total	24,608,457	33,285,706	31,330,562	30,099,428	28,770,106

(a) Paid from War Loan Fund. (b) Including £857,932 to make good deficiency in War Loan Fund.

3. Expenditure from War Loan Fund.—The following table gives the details of the war expenditure from loans, showing the expenditure on account of each Department, etc. :—

EXPENDITURE FROM WAR LOAN FUND, 1919-20 TO 1923-24.

Department, Etc.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
	£	£	£	£	£
Defence and Navy	21,559,812	599,419	(a) 311,530	179,149	(a) 179,549
Treasury	15,379,318	15,330,885	6,648,039	1,249,968	612,649
Prime Minister	140,713	1,678,775	(a) 11,221	(a) 94,548	228,352
Trade and Customs	(a) 41,680	(a) 54,602	(a) 158	(a) 23,239	4,252
Repatriation	8,090,614	6,593,924	1,247,466	480,620	1,720,768
Home and Territories	38,531	7,200	4,381	(a) 889	25,543
Works and Railways	220,279	(a) 7,100	..	(a) 58,367	..
Total War and Repatriation Expenditure	45,385,587	24,148,501	7,576,977	1,762,694	2,412,015
Redemptions—					
Gratuity Bonds cashed	685,008	8,035,066	2,191,772	2,866,285	(b) 14,561,898
Treasury Bills .. .. .	..	..	2,000,000	..	..
Total Expenditure from War Loan Fund	46,070,595	32,183,567	11,768,749	4,628,979	16,973,913

(a) Repayment.

(b) Including repayment of £6,000,000, advanced by Banks for payment of War Gratuities.

The large sums debited to the Treasury are mainly on account of advances to the States, and the money has been spent partly in settling soldiers on the land, and partly in providing reserve employment through Local Government Bodies. The expenditure under the heading "Repatriation" was incurred under the working of the War Service Homes Act of 1918.

§ 6. Old-age and Invalid Pensions.

1. General.—In previous issues of this work an account was given of the introduction of the old-age pension system into Australia, together with a detailed description of the Commonwealth Invalid and Old-age Pensions Act of 1908 which became operative on 1st July, 1909. (See Year Books, Nos. 3 to 8.) An amendment of this Act, assented to on 30th September, 1916, made a very important alteration. Section 24 originally enacted that the pension "shall not exceed the rate of twenty-six pounds per annum in any event, nor shall it be at such a rate as will make the pensioner's income, together with pension, exceed fifty-two pounds per annum." It was amended (a) by omitting the words "twenty-six pounds," and inserting in their stead the words "thirty-two pounds ten shillings," and (b) by omitting the words "fifty-two pounds" and inserting in their stead the words "fifty-eight pounds ten shillings." Section 26 originally enacted that if an applicant for pension was in receipt of board or lodging, the actual or estimated value or cost thereof should be counted as income, to an extent not exceeding five shillings per week. This was amended by omitting the words "five shillings" and inserting in their stead the words "seven shillings and sixpence."

In 1919 the Act was again amended, and the rate of pension raised to £39 per annum and the maximum amount allowable to £65 per annum. The estimated value of board and lodging was raised to 10s. per week.

A further amending Act in 1923 raised the rate of pension to £45 10s. per annum and the maximum amount allowable to £78 per annum.

In 1920 special provision was made for a permanently blind person, by which the amount of pension may be at such a rate (not exceeding £39) per annum, as will make his income, together with the pension, equal to an amount not exceeding £221 per annum or such other amount as is declared to be a basic wage.

2. Old-age Pensions.—(i) *Summary, 1924.* Details regarding Old-age Pensions as at 30th June, 1924, are as follows:—

OLD-AGE PENSIONS.—SUMMARY, 1924.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
Claims examined during year ended 30th June, 1924 ..	7,054	4,488	2,524	1,182	1,181	666	17,095
Claims rejected	482	371	494	40	156	2	1,545
Claims granted	6,572	4,117	2,030	1,142	1,025	664	15,550
Transfers from other States ..	582	528	169	212	105	99	1,695
Existing 30th June, 1923 ..	41,220	31,248	13,812	10,166	5,599	5,344	107,389
	48,374	35,893	16,011	11,520	6,729	6,107	124,634
Deduct —							
Deaths	3,320	2,402	1,029	758	369	417	8,295
Cancellations and transfers to other States ..	1,311	888	265	352	261	208	3,285
	4,631	3,290	1,294	1,110	630	625	11,580
Old-age Pensions existing on 30th June, 1924 ..	43,743	32,603	14,717	10,410	6,099	5,482	113,054

(ii) *Sexes of Pensioners.*—Of the 113,054 persons in receipt of pensions at 30th June, 1924, 45,117 (or 40 per cent.) were males, and 67,937 (or 60 per cent.) were females. Details for the several States are as follows:—

OLD-AGE PENSIONS.—SEXES OF PENSIONERS, 1924.

State.	Males.	Females.	Total.	(a) Masculinity.
New South Wales	18,179	25,564	43,743	— 16.98
Victoria	12,260	20,343	32,603	— 24.79
Queensland	6,355	8,362	14,717	— 13.64
South Australia	3,702	6,708	10,410	— 28.88
Western Australia	2,608	3,491	6,099	— 14.48
Tasmania	2,013	3,469	5,482	— 26.56
Total	45,117	67,937	113,054	— 20.19

(a) Excess of males over females in each 100 of total pensioners.

(iii) *Ages and Conjugal Condition of Pensioners.* The recorded ages of the 15,550 persons to whom pensions were granted during the year 1923-24 varied considerably, ranging from 2,592 at age 60 to one at age 100. Particulars for quinquennial age-groups are as follows :—

OLD-AGE PENSIONS GRANTED 1923-24.—AGES AND CONJUGAL CONDITION OF PENSIONERS,

Age Groups.	Males.				Females.				Grand Total.
	Single.	Married.	Widowed.	Total.	Single.	Married.	Widowed.	Total.	
60-64 ..	295	649	165	1,109	590	2,508	2,225	5,323	6,432
65-69 ..	1,068	2,458	865	4,391	148	869	627	1,644	6,055
70-74 ..	275	715	301	1,291	62	329	302	693	1,984
75-79 ..	78	210	127	415	20	77	189	286	701
80-84 ..	23	57	63	143	5	19	104	128	271
85-89 ..	5	8	17	30	3	3	43	49	79
90 and above ..	..	3	5	8	..	..	20	20	28
Total ..	1,744	4,100	1,543	7,387	848	3,805	3,510	8,163	15,550

3. *Invalid Pensions.*—(i) *Summary, 1924.* Details as at 30th June, 1924, are given hereunder :—

INVALID PENSIONS.—SUMMARY, 1924.

Particulars.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Total.
Claims examined during year ended 30th June, 1924 ..	2,969	2,010	1,387	465	796	324	7,951
Claims rejected	594	366	426	76	354	62	1,878
Claims granted	2,375	1,644	961	389	442	262	6,073
Transfers from other States ..	158	109	67	51	15	20	420
Existing 30th June, 1923 ..	16,352	11,707	5,359	2,593	2,063	1,990	40,064
	18,885	13,460	6,387	3,033	2,520	2,272	46,557
Deduct—							
Deaths	888	830	328	182	160	151	2,539
Cancellations and Transfers to other States ..	483	410	177	120	110	101	1,401
	1,371	1,240	505	302	270	252	3,940
Invalid Pensions existing 30th June, 1924	17,514	12,220	5,882	2,731	2,250	2,020	42,617

(ii) *Sexes of Pensioners.* Of the 42,617 persons in receipt of invalid pensions on 30th June, 1924, 19,391, or 46 per cent., were males, and 23,226, or 54 per cent., were females. Details for the several States are as follows :—

INVALID PENSIONS.—SEXES OF PENSIONERS, 1924.

State.	Males.	Females.	Total.	(a) Masculinity.
New South Wales	7,763	9,751	17,514	-11.35
Victoria	5,722	6,498	12,220	- 6.35
Queensland	2,899	2,983	5,882	- 1.43
South Australia	999	1,732	2,731	-26.84
Western Australia	1,109	1,141	2,250	- 1.42
Tasmania	899	1,121	2,020	-10.99
Total	19,391	23,226	42,617	- 9.00

(a) Excess of males over females in each 100 of total pensioners.

(iii) *Ages and Conjugal Condition of Pensioners, 1924.* The recorded ages of the 6,073 persons to whom invalid pensions were granted during the period under review varied from 16 to 84. The following table gives particulars for those up to age 20, and in decennial age-groups after age 20 :—

INVALID PENSIONS.—AGES AND CONJUGAL CONDITION OF PENSIONERS, 1924.

Age Groups.	Males.				Females.				Grand Total.
	Single.	Married.	Widowed.	Total.	Single.	Married.	Widowed.	Total.	
16-19 ..	269	1	..	270	251	..	..	251	521
20-29 ..	292	66	1	359	317	27	9	353	712
30-39 ..	185	228	7	420	260	73	72	405	825
40-49 ..	201	423	47	671	224	140	163	527	1,198
50-59 ..	365	684	111	1,160	278	459	561	1,298	2,458
60-69 ..	33	88	28	149	17	52	68	137	286
70-79 ..	4	24	13	41	4	7	18	29	70
80 and over ..	..	2	1	3	..	..	..	..	3
Total ..	1,349	1,516	208	3,073	1,351	753	891	3,000	6,073

4. *Cost of Administration.*—Under the State régime the cost of administration differed considerably in the several States, and for 1908-9 represented in New South Wales 4.17 per cent. of the amount actually paid in pensions. In Victoria for the same year the corresponding percentage was 0.70. During the year 1923-24 the total cost to the Commonwealth of administering the Old-age and Invalid Pensions Department was

£92,366, or about 1.4 per cent of the amount actually paid in pensions. Details concerning the cost of administration for 1923-24 are as follows:—

OLD-AGE AND INVALID PENSIONS.—COST OF ADMINISTRATION, 1923-24.

Heading.	Amount.
	£
Salaries	37,335
Temporary assistance	1,036
Payments to State Governments and payment of commission to Postmaster-General's Department, at 11s. 6d. per £100 paid	35,498
Postage and telegrams	4,619
Medical examinations	5,046
Other expenses	8,832
Total	92,366

The actual sum disbursed in Old-age and Invalid Pensions in the financial year 1923-24, apart from the cost of administration, was £6,426,752.

5. Summary.—The following table gives detailed statistical information concerning the working of the Act for the last five years:—

OLD-AGE AND INVALID PENSIONS.—SUMMARY, AUSTRALIA, 1920 TO 1924.

Financial Year ended 30th June—	Number of Pensioners.			Amount Paid in Pensions.	Amount Paid to Asylums for Maintenance of Pensioners.	Total Payment to Pensioners and Asylums.	Cost of Administration.	Cost of Administration per £100 paid to Pensioners and Asylums.	Average Fortnightly Pension on last day of Financial Year.
	Old-age.	Invalid.	Total.						
				£	£	£	£	£ s. d.	s. d.
1920	99,170	35,231	134,401	4,411,629	72,675	4,484,304	74,120	1 13 1	29 1
1921	102,415	37,981	140,396	5,074,336	75,905	5,150,241	88,271	1 14 3	28 9
1922	105,096	39,019	144,115	5,290,056	89,978	5,380,034	93,608	1 14 10	28 9
1923	107,389	40,064	147,453	5,337,936	86,080	5,424,016	87,910	1 12 5	28 9
1924	113,054	42,617	155,671	6,426,752	97,129	6,523,881	92,366	1 8 4	33 9

§ 7. Maternity Allowance.

During the session of 1912 the Federal Parliament passed an Act (assented to on 10th October, 1912) providing for the payment of maternity allowances. The scope and main provisions of the Act are given in Year Book No. 14, p. 1047. The most important conditions are that the sum of five pounds is payable in the case of each confinement resulting in the birth of a viable child whether such child was born alive or dead. The mother must be a native of the Commonwealth, or intend to settle permanently therein. No payment is made in the case of an aboriginal or an Asiatic.

The following table gives a summary in connexion with the working of the Maternity Allowance Act for the years 1920 to 1924:—

MATERNITY ALLOWANCE.—SUMMARY, 1920 TO 1924.

Year.	Claims Paid.	Claims Rejected.	Amount Paid.	Cost of Administration.	Cost per £100 of allowance paid.
			£	£	£ s. d.
1919-20 ..	125,173	621	625,865	12,785	2 0 10
1920-21 ..	140,152	622	700,760	16,173	2 6 2
1921-22 ..	138,140	520	690,700	15,441	2 4 9
1922-23 ..	137,687	421	688,435	16,008	2 6 6
1923-24 ..	134,035	432	670,175	14,770	2 4 1

§ 8. War Pensions.

1. General.—An Act for the provision of war pensions was passed in 1914 and amended in 1915 and 1916. Its scope can be determined by the following extract from section 3. "Upon the death or incapacity of any member of the forces whose death or incapacity results, or has resulted, from his employment in connexion with warlike operations in which His Majesty is, or has since the commencement of the present state of war been engaged, the Commonwealth shall, subject to this Act, be liable to pay to the member or his dependents, or both, as the case may be, pensions in accordance with this Act."

2. Number of Pensioners.—The following table shows the number of pensioners and the places where payments were made at the 30th June, 1924 :—

WAR PENSIONS.—NUMBER OF PENSIONERS, 1924.

Where Paid.	Incapacitated Members of the Forces.	Dependents of—		Total.
		Deceased Members.	Incapacitated Members.	
London	1,553	4,494	3,244	9,291
South Africa	50	47	56	153
New Zealand	227	257	233	717
Other Overseas	24	5	20	49
New South Wales	24,037	11,970	37,097	73,104
Victoria	24,214	13,763	41,581	79,558
Queensland	8,057	3,884	12,375	24,316
South Australia	4,079	3,812	6,957	14,848
Western Australia	7,533	3,781	12,987	24,301
Tasmania	2,986	1,800	5,638	10,424
Total	72,760	43,813	120,188	236,761

3. Expenditure on War Pensions, 1924.—The expenditure on war pensions for the year ended 30th June, 1924, is given in the table hereunder :—

WAR PENSIONS.—EXPENDITURE, 1923-24.

Where Paid.	Amount.	Where Paid.	Amount.
	£		£
New South Wales	2,443,149	London and elsewhere	331,414
Victoria	2,094,248		7,090,815
Queensland	767,560	Payments in Australia in respect of other countries ..	291,105
South Australia	446,951		7,381,920
Western Australia	714,805	Less amounts other countries, including payments by contra	212,636
Tasmania	292,688	Total	7,169,284

4. **Cost of Administration.**—The cost of administration in 1923-24 was £144,762, made up as follows :—

WAR PENSIONS.—COST OF ADMINISTRATION, 1923-24.

Items.	Total.
	£
Salaries	73,132
Postage and telegrams	3,012
Medical examinations	3,353
Services of Registrars, Police, and Postal Officials	43,091
London Office	6,791
Fees for State Boards	4,975
Miscellaneous	10,408
Total	144,762

§ 9. Commonwealth Public Service Superannuation Fund.

This Fund which was inaugurated on the 20th November, 1922, is maintained by contributions of employees of the Commonwealth Public Service and by payments from the Consolidated Revenue—the latter being made when the officers retire on pension.

The unit of pension is £26 per annum, and the number of units in respect of which an employee can contribute bears relation to the salary in accordance with the scale set out in Section 13 of the *Superannuation Act* 1922, the minimum pension being two units or £52 per annum, and the maximum 16 units or £416 per annum. The rates of contribution depend on the age at which the employee commences to contribute, a special concession being made in respect of employees in the service at the commencement of the Act who were then upwards of 30 years of age.

The pension is payable when the employee reaches 65 years of age, or is retired through physical or mental incapacity at an earlier age. Provision is, however, made for retirement at an earlier age than 65 under special conditions as to contribution. The widow of a contributor or pensioner receives one-half of the pension to which her husband was entitled and a pension of £13 per annum in respect of each child under 16 years of age.

The number of contributors to the fund at 30th June, 1924, was 26,794, viz., 23,433 males and 3,361 females, and the average number of units contributed for was 3.76, representing a pension of £97 15s. per annum.

For the year ended 30th June, 1924, receipts were £331,414, of which £274,943 represented employees' contributions, £42,239 from the Consolidated Revenue, and £14,232 from interest. Payments amounted to £55,843, including £45,349 paid in pensions. Of the balance of £492,329 which remained on hand on the 30th June, 1924, £492,012 was invested in Commonwealth Inscribed Stock.

Pensions in force on the 30th June, 1924, numbered 717 with an annual liability of £49,626, of which £41,170 represents the share payable from the Consolidated Revenue.

The Act of October, 1922, was amended in October, 1924. It was known that the original scheme would not be entirely suited to the needs of officers of the Defence Department owing to their earlier and irregular ages for retirement. A promise was made during the passage of the original Act, that attention should be given to the especial needs of the Defence Department at a later date. The Amending Act of 1924 was passed with the

main object of redeeming this promise, and rectifying the anomalies which had arisen. At the same time certain clauses appeared in the Act which considerably modified the scheme :—

- (a) The Amending Act brought about 1,700 new Defence officers into the scheme, thus increasing the number of participants to about 28,500. The pension liability of the Government is increased by about 6 per cent.
- (b) The original Act provided an invalidity benefit only after seven years' service. The amending Act abolishes the seven year period, and makes the eligibility to this benefit vest from the beginning of service.
- (c) The age for retirement in the Defence Department was fixed at 60 years. If officers retire before 60, but after the age of 55, they receive an actuarially equivalent pension.
- (d) The privilege of retiring at age 60 instead of 65 was extended to the General Service. If an officer elects to take this option he must contribute according to a new scale of rates based upon retirement at 60. He pays the rates appropriate to his then age, but as a set off he receives a refund of contributions paid under the old scale. This refund is not paid in cash, but is applied to the reduction of future contributions.

B. STATE FINANCE.

§ 1. General.

1. **Functions of State Governments.**—In comparing the financial returns of the States allowance must be made for the various functions discharged by the respective Governments, and for local conditions in each case. Direct comparisons of expenditure are difficult, owing to the fact that functions which in one State are assumed by the Central Government are in another relegated to local governing bodies, and that costly developmental work may, under certain conditions, be not only economically justifiable, but may be essential to progress, while parsimonious expenditure may be an economic blunder. A large expenditure may, therefore, be an indication either of gross extravagance and bad economy on the one hand, or of healthy progress and good economy on the other. Similarly, as regards revenue, imposts which in some States are levied by the Central Government, are in others dealt with locally. Care, therefore, is needed in instituting comparisons, and the particulars contained in this chapter should be read in connexion with those contained in the chapter dealing with Local Government. In many respects, moreover, the budgets of the Australian Governments differ materially from those of most European countries, owing to the inclusion therein of the revenue and expenditure of departments concerned in rendering public services, such for instance as railways, tramways, water supply, etc., which in other countries are often left to private enterprise.

2. **Accounts of State Governments.**—The various financial transactions of the States are in each case concerned with one or other of three Funds—the “Consolidated Revenue Fund,” the “Trust Funds,” and the “Loan Funds.” All revenue collected by the State is placed to the credit of its Consolidated Revenue Fund, from which payments are made under the authority of an Annual Appropriation Act passed by the Legislature, or by a permanent appropriation under a special Act. The hypothecation of the revenue from a specific tax to the payment for some special service is not practised in Australia, all statutory appropriations ranking on an equality as charges on the Consolidated Revenue Fund. The Trust Funds comprise all moneys held in trust by the Government, and include such items as savings' banks funds, sinking funds, insurance companies' deposits, etc. The Loan Funds are debited with all loan moneys raised by the State, and credited with the expenditure therefrom on public works or other purposes.

3. **Inter-relation of Commonwealth and State Finance.**—The principal alteration in State finance brought about by Federation was that the States transferred to the Commonwealth the large revenue received by the Customs and Postal Departments, and were relieved of the expenditure connected with these and the Defence Departments,

while, in their place, a new item of State revenue was introduced, viz., the payment to the States of a Commonwealth subsidy. With regard to this, an important development in the financial relations of the Commonwealth and State Governments was discussed at the Premiers' Conference of May, 1923. The main problem for settlement was that arising from the raising and allocation of the revenues of the Commonwealth and States. The Conference aimed at the termination of the present arrangement under which the Commonwealth pays to the States on a *per capita* basis part of the revenue which it collects; concurrently it was hoped to simplify the entire taxation systems of Australia.

The Commonwealth Prime Minister submitted a scheme intended to secure the attainment of both of these objects. He proposed to cease to collect income tax from all individuals whose incomes were £2,000 a year or less, and to grant an exemption of £2,000 to individuals with incomes over that amount. At the same time he proposed to discontinue the *per capita* payments to the States, leaving the latter free to balance their Budgets by increasing their income tax revenues in the field vacated by the Commonwealth. On the basis of figures supplied by the Commonwealth Treasury, it was believed that Queensland and Tasmania would stand to lose by this arrangement. Accordingly it was proposed to stabilize the finances of these States by a grant of £55,000 to the former and £80,000 to the latter. Inclusive of the above shortage, and certain special payments to the States of Queensland, Western Australia, and Tasmania, the Commonwealth would make an annual payment of £778,000 per annum to these three States. Finally, the Commonwealth Government proposed to enter on these arrangements for a period of five years, and thereafter until otherwise provided.

These proposals were not acceptable to the State Ministers, who put forward counter-proposals for the complete retirement of the Commonwealth from the field of income taxation. The States were willing on that condition to relinquish the capitation payments and to contribute to the Commonwealth Treasury sums to cover any Commonwealth loss entailed under the proposals.

As Commonwealth Ministers could not accept the offer of the States, the Prime Minister proposed that the Commonwealth should vacate the field of income taxation so far as it related to individuals, but should retain the right to tax companies up to a maximum limit of 2s. 6d. in the £1. As a set-off against this the Commonwealth would cease the payment to the States of the capitation allowances and the interest on the transferred properties. Before completing the new scheme it would be necessary to ascertain the exact value of the field to be vacated by the Commonwealth, because certain cash payments to be made by the Commonwealth to the States to save embarrassment of State finances could not be calculated until that value was ascertained.

These suggestions were much more favourably received, and ultimately five of the States—New South Wales dissenting—agreed to accept the principle of the new Commonwealth proposals.

The statistics relating to income tax have since been carefully investigated, and it has been found that figures on which to base payments to the States would not be available for some time. The operation of the scheme was therefore deferred for one year. In June, 1924, the scheme was again considered by the Commonwealth Government, but owing to the continuance of opposition the operation of the proposals has again been postponed. Meanwhile efforts were made to arrange for one collecting authority for both State and Federal income taxes. Agreements have been drawn up between the Commonwealth, on the one hand, and all the States except Western Australia, on the other, under which the State taxation officers will collect both taxes, except where the Commonwealth incomes are derived from two or more States. In Western Australia there has been for some years only one collecting authority—the Commonwealth.

Provision for the taking over by the Commonwealth of certain of the public debts of the States is made in section 105 of the Constitution, and a proposed law extending this provision to the whole of the State indebtedness, which passed both Houses of the Federal Legislature by the statutory majority, was submitted to a referendum at the election in April, 1910, and received the requisite endorsement by the electorate. No action has, however, been taken, although the subject has, on more than one occasion, been under discussion.

§ 2. State Consolidated Revenue Funds.

Division I.—Revenue.

1. General.—The principal sources of State revenue are :—

- (a) Taxation.
- (b) The public works and services controlled by the State Governments.
- (c) Sale of and rental from Crown lands.
- (d) The Commonwealth subsidy.
- (e) Miscellaneous sources, comprising fines, fees, interest, etc.

Of these sources, that yielding the largest revenue for the States as a whole is the group of public works and services, the principal contributor being the Government railways and tramways. Next in magnitude comes Taxation, followed in order by the Commonwealth Subsidy and Land Revenue.

2. Revenue Received.—The following table furnishes particulars of the total amounts and the amounts per head of consolidated revenue received by the several States during the five years 1919–20 to 1923–24 :—

STATE CONSOLIDATED REVENUE, 1919–20 TO 1923–24.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	All States.
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TOTAL COLLECTIONS.

	£	£	£	£	£	£	£
1919–20	28,650,496	15,866,184	11,293,743	6,582,788	5,863,501	1,815,031	70,071,743
1920–21	34,031,396	19,054,475	12,601,031	7,151,366	6,789,565	2,105,449	81,733,282
1921–22	35,637,820	20,357,733	12,311,378	7,771,752	6,907,107	2,181,395	85,167,185
1922–23	36,145,944	21,634,677	12,599,403	8,431,700	7,207,492	2,174,062	88,193,278
1923–24	37,351,809	23,075,968	13,428,039	8,932,340	7,865,595	2,447,677	93,101,428

PER HEAD OF POPULATION.

	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
1919–20	14	1	1	10	11	1	15	6	10	13	13	5	17	17	8	8	13	0	13	4	3
1920–21	16	5	5	12	9	5	16	15	9	14	11	4	20	9	10	9	17	11	15	2	1
1921–22	16	15	0	13	2	7	16	0	6	15	9	5	20	11	6	9	19	10	15	9	2
1922–23	16	12	8	13	12	1	15	19	6	16	8	7	20	19	7	9	18	7	15	13	1
1923–24	16	17	8	14	3	11	16	11	1	17	0	6	22	4	7	11	3	6	16	3	10

During the four years from 30th June, 1920, to 30th June, 1924, the aggregate revenue of the States increased by no less a sum than £23,029,685, or about 33 per cent. Increases were in evidence in all the States, the largest being that of £8,701,313 in New South Wales. This general advance is the more notable since, during recent years, a much smaller amount has been received from the Commonwealth in the way of subsidy, than was the case up to 1910.

There has been a marked increase in the collections per head in all the States. Western Australia throughout the period has occupied the premier position, and in 1923–24 the revenue per head in that State exceeded the average for Australia by about 37 per cent. In Tasmania, however, the revenue per head has averaged about 60 per cent. only of the average for Australia.

3. Sources of Revenue.—(i) *General.* Classifying the revenue of the several States in the manner indicated in 1 *ante*, particulars for the year 1923–24 are as follows :—

STATE CONSOLIDATED REVENUE.—SOURCES, 1923-24.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	All States.
TOTAL REVENUE.							
Taxation	£ 7,988,131	£ 4,476,158	£ 3,617,201	£ 1,841,720	£ 1,173,568	£ 928,360	£ 20,025,138
Public works and services	23,532,422	13,460,856	5,927,785	5,435,612	4,388,088	967,887	53,712,650
Land	1,929,703	447,218	1,514,455	292,584	462,657	83,290	4,729,907
Commonwealth subsidy	2,738,725	2,014,746	1,004,892	650,453	(a) 585,723	(b) 356,565	7,351,104
Miscellaneous	1,162,823	2,676,990	1,363,706	711,971	1,255,559	111,575	7,282,629
Total	37,351,809	23,075,968	13,423,039	8,932,340	7,865,595	2,447,677	93,101,428

PER HEAD OF POPULATION.

	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
Taxation	3	12	3	2	15	1	4	9	2	3	10	2	3	6	4	4	4	9
Public works and services	10	12	9	8	5	8	7	6	2	10	7	2	12	8	1	4	8	5
Land	0	17	5	0	5	6	1	17	4	0	11	2	1	6	2	0	7	7
Commonwealth subsidy	1	4	9	1	4	9	1	4	9	1	4	10	1	13	1	1	12	7
Miscellaneous	0	10	6	1	12	11	1	13	8	1	7	2	3	10	11	0	10	2
Total	16	17	8	14	3	11	16	11	1	17	0	6	22	4	7	11	3	6

(a) Including special grant of £120,000.

(b) Including special grant of £85,000.

In connexion with the item Public Works and Services, it should be borne in mind that services performed by the Government in one State may, in another, be carried out by a Board or Trust. For instance, in New South Wales and Western Australia the tramway systems are controlled by the Government, while in the other States ownership is vested in Trusts. Harbours and rivers services and water supply and sewerage are also controlled in some cases by the State and in others by Trusts.

The magnitude of the revenue per head from public works and services in the case of Western Australia is mainly due to the fact that the number of miles of railway in that State is large compared with the population, while the revenue-earning power of the railways is also high. In New South Wales and Western Australia the revenue from tramways is also included.

(ii) *Relative Importance of Various Sources.* The following table indicates the relative importance of the different sources of revenue in the several States, by showing the percentage which each item of revenue bears to the total for the State for the year 1923-24 :—

STATE CONSOLIDATED REVENUE.—PERCENTAGE OF ITEMS. 1923-24.

[illegible]

(iii) *Revenue from Taxation.*—(a) *General.* Prior to Federation, duties of Customs and Excise constituted the principal source of revenue from taxation. At present, the most productive State tax is the income tax, imposed in all the States. For 1923-24 stamp duties occupied second place. In addition to these, a State land tax and licence fees of various kinds are collected in all the States, while a dividend tax is levied in Western Australia. The total revenue from taxation collected by the States during the year 1923-24 was £20,025,138, details of which are set forth in the table hereunder:—

STATE CONSOLIDATED REVENUE FROM TAXATION, 1923-24.

Taxation.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	All States.
	£	£	£	£	£	£	£
Probate and succession duties	965,200	798,315	280,472	191,373	66,969	71,750	2,374,079
Other stamp duties	1,538,924	1,179,364	405,056	430,045	194,176	180,773	3,928,338
Land Tax	2,657	412,165	445,873	184,226	71,449	120,657	1,237,027
Income Tax	4,373,519	1,702,483	2,300,044	894,283	719,160	431,271	10,420,760
Licences	333,934	363,988	101,379	49,292	67,904	38,000	954,497
Other Taxation	773,897	19,843	84,377	92,501	53,910	85,909	1,110,437
Total	7,988,131	4,476,158	3,617,201	1,841,720	1,173,568	928,360	20,025,138

(a) Includes £216,895 Dividend Tax.

The total amount and the amount per head raised from taxation by the several State Governments during the five years 1919-20 to 1923-24 is given in the following table:—

STATE CONSOLIDATED REVENUE FROM TAXATION, 1919-20 TO 1923-24.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	All States.
TOTAL.							
	£	£	£	£	£	£	£
1919-20	4,962,518	3,159,767	3,323,745	1,391,830	844,197	609,576	14,291,633
1920-21	7,388,133	3,846,833	3,682,642	1,622,076	955,359	708,603	18,203,646
1921-22	7,249,017	3,791,174	3,420,296	1,778,576	881,159	727,701	17,847,923
1922-23	7,799,118	4,077,046	3,330,885	1,816,776	987,558	728,175	18,739,558
1923-24	7,988,131	4,476,158	3,617,201	1,841,720	1,173,568	928,360	20,025,138

PER HEAD OF POPULATION.

	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1919-20	2 8 8	2 2 0	4 10 4	2 17 10	2 11 6	2 18 1	2 14 0
1920-21	3 10 8	2 10 4	4 18 1	3 6 1	2 17 8	3 6 7	3 7 3
1921-22	3 8 2	2 8 11	4 9 0	3 10 10	2 12 6	3 6 8	3 4 9
1922-23	3 11 9	2 11 3	4 4 6	3 10 10	2 17 6	3 6 6	3 6 6
1923-24	3 12 3	2 15 1	4 9 2	3 10 2	3 6 4	4 4 9	3 9 8

During the period between 30th June, 1920, and 30th June, 1924, State revenue from taxation increased by 40 per cent, the increase varying considerably in the different States. The great increase of recent years in New South Wales is due principally to the broadening of the basis of the State Income Tax, increased receipts from Stamp Duties, and in addition in 1923-24, £518,636 was collected from Racing Taxes. While State taxation for the year 1921-22 showed a slight decline from the previous year, owing mainly to diminished collections in New South Wales and Queensland, increases occurred in 1922-23 and 1923-24 in every State except Queensland.

Taking the States as a whole, taxation increased by 15s. 8d. per head during the period from 1919-20 to 1923-24, the most marked increase occurring in the case of New South Wales.

(b) *Probate and Succession Duties.* Probate duties have been levied for many years in all the States, but the provisions of the Acts governing the payment of duty differ

widely both in regard to the ordinary rates and those which apply to special beneficiaries. A table showing the values of the estates in which probates and letters of administration were granted is given hereinafter. (See also Private Finance § 8 hereinafter.)

The duties collected for the financial years 1919-20 to 1923-24 are as follows :—

STATE PROBATE AND SUCCESSION DUTIES.—COLLECTIONS, 1919-20 TO 1923-24.

State.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
	£	£	£	£	£
New South Wales ..	1,062,533	734,352	907,307	1,176,596	965,200
Victoria ..	881,423	702,468	706,181	697,482	798,315
Queensland ..	(a)	328,204	295,748	257,402	280,472
South Australia ..	192,540	158,107	197,764	205,382	191,373
Western Australia ..	121,951	42,407	76,817	45,997	66,969
Tasmania ..	50,271	53,407	61,142	56,530	71,750
Total ..	2,308,718 (b)	2,018,945	2,244,959	2,439,389	2,374,079

(a) Included in Stamp Duties.

(b) Excluding Queensland.

(c) *Other Stamp Duties.* The revenue derived from stamp duties (exclusive of probate and succession duties) for the years 1919-20 to 1923-24 is shown in the accompanying table :—

STATE STAMP DUTIES.—COLLECTIONS, 1919-20 TO 1923-24.

State.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
	£	£	£	£	£
New South Wales ..	978,343	1,414,468	1,343,389	1,460,436	1,538,924
Victoria ..	822,489	930,221	932,649	1,117,839	1,179,364
Queensland ..	698,382	332,559	308,991	353,745	405,056
South Australia ..	325,034	370,288	346,918	397,050	430,045
Western Australia ..	173,541	177,404	164,929	173,453	194,176
Tasmania ..	128,574	148,893	144,125	166,424	180,773
Total ..	3,126,363 ^a	3,373,833	3,241,001	3,668,947	3,928,338

(a) Including Queensland probate and succession duties.

(d) *Land Tax.* All the States impose a Land Tax, although Queensland, the last State to fall into line, collected its first levy in 1915-16. In the other States the impost is of long standing. In New South Wales the Land Tax is levied on the unincorporated portion of the western division of the State only.

The following table shows the amount collected by means of such taxes during the financial years 1919-20 to 1923-24 :—

STATE LAND TAX.—COLLECTIONS, 1919-20 TO 1923-24.

State.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
	£	£	£	£	£
New South Wales ..	2,834	2,717	2,490	2,570	2,657
Victoria ..	314,217	331,756	372,060	392,594	412,165
Queensland ..	459,188	469,175	480,518	417,865	445,873
South Australia ..	146,336	168,020	162,104	197,107	184,226
Western Australia ..	46,415	57,791	42,549	79,983	71,449
Tasmania ..	87,785	89,085	97,031	97,352	120,657
Total ..	1,056,775	1,118,544	1,156,752	1,187,471	1,237,027

(e) *Income Tax.* A duty on the income of persons, whether it be derived from personal exertion or from property, is also imposed in all the States. As might be expected, the rates, exemptions, etc., are widely divergent, but the general principles of the several Acts are similar. The Dividend Duties Act of Western Australia supplied to a certain extent the place of an income tax in that State in former years, but, with the increasing demands upon the Treasury, the levying of a direct income tax was found necessary.

In 1923 agreements were made between the Commonwealth and all States except Western Australia in respect to the collection of the Commonwealth Income Tax. Reference to this subject is made in Section A of this Chapter (Commonwealth Finance, §2). A single collecting authority has been in existence in Western Australia for some years.

The following table shows the total amount collected in the several States during the years 1919–20 to 1923–24. In the case of Western Australia the amount of dividend duty collected is included.

STATE INCOME AND DIVIDEND TAXES.—COLLECTIONS, 1919–20 TO 1923–24.

State.	1919–20.	1920–21.	1921–22.	1922–23.	1923–24.
	£	£	£	£	£
New South Wales ..	2,308,267	4,399,360	4,077,897	4,196,228	4,373,519
Victoria ..	915,551	1,591,198	1,443,209	1,514,256	1,702,483
Queensland ..	2,023,316	2,410,171	2,194,361	2,149,607	2,300,044
South Australia ..	662,384	852,001	975,043	903,460	894,293
Western Australia ..	416,136	579,289	497,879	579,060	719,160
Tasmania ..	279,476	348,005	355,035	325,151	431,271
Total ..	6,605,130	10,180,024	9,543,424	9,667,762	10,420,760

(f) *Commonwealth and State Taxation.* The table hereunder shows the combined Commonwealth and State taxation for each of the years 1919–20 to 1923–24, as well as the amount per head of population :—

TOTAL COMMONWEALTH AND STATE TAXATION, 1919–20 TO 1923–24.

Particulars.	1919–20.	1920–21.	1921–22.	1922–23.	1923–24.
	£	£	£	£	£
Commonwealth taxation	41,847,692	52,427,421	49,678,842	49,885,017	50,852,483
State taxation ..	14,291,633	18,203,646	17,847,923	18,739,558	20,025,138
Total ..	56,139,325	70,631,067	67,526,765	68,624,575	70,877,621
Taxation per head ..	£10/11/9	£13/1/0	£12/5/1	£12/3/7	£12/6/7

Whilst the Commonwealth taxation increased during the period by £9,004,791, all of which was due to Customs and Excise, the State taxation advanced by £5,733,505, the aggregate increase being £14,738,296. The amount *per capita* of total taxation has increased about 16 per cent. in the period under review.

(iv) *Public Works and Services.* A very large proportion of State revenues is made up of receipts from public works and services under the control of the Governments. The principal of these are railways and tramways, harbour works, and water supply and sewerage, while, in addition, State batteries for the treatment of auriferous ores exist in Western Australia, and various minor revenue-producing services are rendered by the Governments of all States. For the year 1923–24 the aggregate revenue from

these sources was £53,712,650, or nearly 58 per cent. of the revenue from all sources. Details of revenue from public works and services for the year 1923-24 are as follows :—

STATE REVENUE FROM PUBLIC WORKS AND SERVICES, 1923-24.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	All States.
	£	£	£	£	£	£	£
Railways and tramways	19,503,486	11,922,195	5,684,653	3,870,854	3,465,296	586,913	45,038,397
Harbour services ..	1,218,638	207,692	69,308	645,949	224,850	..	2,366,437
Public batteries ..	..	620	..	..	39,235	..	39,855
Water supply and sewerage ..	2,057,069	635,636	..	499,114	424,835	..	3,339,654
Other public services ..	748,229	971,713	173,824	419,695	233,872	380,974	2,928,307
Total ..	23,532,422	13,460,856	5,927,785	5,435,612	4,388,088	967,887	53,712,650

(a) Railways only.

(b) Water supply only.

(v) *Lands.* The revenue from the sale and rental of Crown lands has, with few exceptions, been treated from the earliest times as forming part of the Consolidated Revenue Funds, and has been applied to meet ordinary expenses. Where the rentals received are for lands held for pastoral or residential purposes such application of the revenue appears perfectly justifiable. On the other hand, where the rentals are for mineral and timber lands, and in all cases of sales of lands, the proceeding is essentially a disposal of capital to defray current expenses, and is open to adverse criticism. The following table gives the revenue from sales and rentals of Crown lands for the year 1923-24.

STATE LAND REVENUE, 1923-24.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	All States.
	£	£	£	£	£	£	£
Sales ..	92,340	27,858	150	30,326	330,234	32,521	513,429
Rentals ..	1,837,363	419,360	1,514,305	262,258	132,423	50,769	4,216,478
Total ..	1,929,703	447,218	1,514,455	292,584	462,657	83,290	4,729,907

(vi) *Commonwealth Subsidy.* The payments to the States of Commonwealth subsidy represent in each instance a considerable proportion of the States' revenue, and for the year 1923-24 aggregated £7,351,104. A reference to recent proposals to discontinue the payment of this subsidy will be found in Section B, §1. 3. of this chapter. The percentage represented by the subsidy received by each State for 1923-24 on the total revenue of that State is shown in the following table :—

COMMONWEALTH SUBSIDY PAID TO EACH STATE, 1923-24.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	All States.
	£	£	£	£	£	£	£
Commonwealth subsidy	2,738,725	2,014,746	1,004,892	650,453	558,723	636,565	7,351,104
Total revenue ..	37,351,809	23,075,968	13,428,039	8,932,340	7,865,595	2,447,677	93,101,428
Percentage of subsidy on revenue ..	7.33	8.73	7.48	7.28	7.45	14.57	7.90

(a) Including special grant of £120,000.

(b) Including special grant of £85,000.

(vii) *Miscellaneous.* In addition to the foregoing, there are in each State several miscellaneous sources of revenue, including such items as interest, fines, fees, etc., which for the year 1923-24 aggregated £7,282,629. Of this amount, interest was responsible for £4,159,088.

Division II.—Expenditure.

1. *General.*—The principal heads of State expenditure from Consolidated Revenue Funds are :—

- (a) Interest and sinking funds in connexion with public debt.
- (b) Working expenses of railways and tramways.
- (c) Justice.
- (d) Police.
- (e) Penal establishments.
- (f) Education.
- (g) Medical and charitable expenditure.
- (h) All other expenditure.

Of these, that of working expenses of railways and tramways was the most important, and for the year 1923-24 represented about 36 per cent. of the aggregate expenditure from the Consolidated Revenue Fund. Next in importance for that year was the item of interest and sinking fund in connexion with the public debt, then education, medical and charitable expenditure, and police, in the order named.

2. *Total Expenditure.*—The total expenditure from Consolidated Revenue Funds in the several States, and the expenditure per head of population during each of the years 1919-20 to 1923-24 are given in the table hereunder :—

STATE EXPENDITURE.—CONSOLIDATED REVENUE FUNDS, 1919-20 TO 1923-24.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	All States.
TOTAL.							
	£	£	£	£	£	£	£
1919-20	30,210,013	15,752,459	11,266,910	6,457,039	6,531,725	1,828,301	72,046,447
1920-21	34,476,892	18,941,698	12,591,201	7,543,640	7,476,291	2,189,157	83,218,879
1921-22	36,966,525	20,297,279	12,499,970	7,826,241	7,639,242	2,302,077	87,531,334
1922-23	35,342,436	21,611,309	12,784,382	8,426,517	7,612,856	2,472,523	88,250,023
1923-24	37,251,419	23,050,968	13,415,332	8,985,599	8,094,753	2,658,382	93,456,453

PER HEAD OF POPULATION.

	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1919-20	14 16 4	10 9 7	15 6 1	13 8 3	19 18 5	8 14 3	13 11 8
1920-21	16 9 8	12 7 11	16 15 6	15 7 3	22 11 4	10 5 10	15 7 6
1921-22	17 7 5	13 1 9	16 5 5	15 11 6	22 15 1	10 10 11	15 17 8
1922-23	16 5 4	13 11 10	16 4 3	16 8 4	22 3 2	11 5 11	15 13 4
1923-24	16 16 10	14 3 8	16 10 9	17 2 6	22 17 7	12 2 9	16 5 1

As in the case of the table previously given for revenue, the above figures relate to the year ended 30th June.

3. Details of Expenditure for 1923-24.—(i) *General.* The following table shows the total expenditure and expenditure per head under each of the principal items:—

STATE EXPENDITURE.—DETAILS, 1923-24.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	All States.
TOTAL							
	£	£	£	£	£	£	£
Public debt (interest, sinking fund, etc.) ..	8,452,535	6,152,878	3,761,140	2,839,215	2,839,460	1,045,724	25,090,952
Railways and tramways (working expenses) ..	14,206,722	10,818,314	10,988,849	12,791,502	12,533,058	10,558,390	33,896,835
Justice ..	540,055	253,285	150,954	68,167	85,575	20,624	1,118,660
Police ..	1,090,946	789,191	461,446	220,559	180,079	78,313	2,820,534
Penal establishments ..	138,330	101,122	34,635	36,538	23,198	9,475	343,298
Education ..	3,649,833	2,139,578	1,319,188	666,089	606,797	271,269	8,652,754
Medical and charitable ..	1,847,894	984,718	836,197	382,719	365,447	165,290	4,582,265
All other expenditure ..	7,325,104	3,811,832	1,862,923	1,380,810	1,461,139	509,297	16,951,155
Total ..	37,251,419	23,050,968	13,415,332	8,985,599	8,094,753	2,658,382	93,456,453
PER HEAD OF POPULATION.							
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Public debt (interest, sinking fund, etc.) ..	3 16 5	3 15 9	4 12 9	5 8 2	8 0 6	4 15 6	4 7 3
Railways and tramways (working expenses) ..	6 8 6	5 8 6	6 3 0	5 6 5	7 3 2	2 11 0	5 17 11
Justice ..	0 4 10	0 3 1	0 3 9	0 2 7	0 4 10	0 1 11	0 3 11
Police ..	0 9 10	0 9 9	0 11 4	0 8 5	0 10 2	0 7 2	0 9 10
Penal establishments ..	0 1 3	0 1 3	0 0 10	0 1 5	0 1 4	0 0 10	0 1 2
Education ..	1 13 0	1 6 4	1 12 6	1 5 5	1 14 4	1 4 9	1 10 1
Medical and charitable ..	0 16 9	0 12 1	1 0 8	0 14 7	1 0 8	0 15 1	0 15 11
All other expenditure ..	3 6 3	2 6 11	2 5 11	3 15 6	4 2 7	2 6 6	2 19 0
Total ..	16 16 10	14 3 8	16 10 9	17 2 6	22 17 7	12 2 9	16 5 1

(a) Railways only.

(ii) *Relative Importance of Various Items.* The relative importance of the items varies considerably, and the following table shows for each State the percentage under each item on the total expenditure:—

STATE EXPENDITURE.—PERCENTAGES OF ITEMS, 1923-24.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	All States.
	%	%	%	%	%	%	%
Public debt (interest, sinking fund, etc.) ..	22.69	26.69	28.04	31.60	35.08	39.34	26.85
Railways and tramways (working expenses) ..	38.14	38.26	37.19	31.07	31.29	21.00	36.27
Justice ..	1.45	1.10	1.13	0.76	1.06	0.78	1.20
Police ..	2.93	3.42	3.44	2.45	2.22	2.95	3.02
Penal establishments ..	0.37	0.44	0.26	0.41	0.29	0.36	0.37
Education ..	9.80	9.28	9.83	7.41	7.50	10.20	9.26
Medical and charitable ..	4.96	4.27	6.23	4.26	4.51	6.22	4.90
All other expenditure ..	19.66	16.54	13.88	22.04	18.05	19.15	18.13
Total ..	100.00	100.00	100.00	100.00	100.00	100.00	100.00

(c) Railways only.

The interest and sinking fund on the public debt, together with the working expenses of the railways and tramways, represented for the year 1923-24 about 60 per cent. of the aggregate State expenditure, a proportion which has been maintained with great regularity for many years past.

Division III.—Balances.

1. Position on 30th June, 1924.—On various occasions in each of the States the revenue collected for a financial year has failed to provide the funds requisite for defraying the expenditure incurred during that year, the consequent deficit being usually liquidated either by cash obtained from trust funds, or by the issue of Treasury bills. Thus, during the period of financial stress resultant upon the crisis of 1893 and the drought conditions of succeeding years, the accumulated overdrafts of several of the States grew very rapidly, and the situation has changed very much for the worse in recent years, so that no State has now a credit balance. The position of the balances of the several Consolidated Revenue Funds on 30th June, 1924, was as follows :—

STATE CONSOLIDATED REVENUE FUND BALANCES, 30th JUNE, 1924.

State.	Debit Balance.		Net Debit Balance.
	Cash Overdraft.	Overdraft liquidated by Treasury Bills.	
	£	£	£
New South Wales	2,674,365	..	2,674,365
Victoria	18,796	903,286	922,082
Queensland	797,303	..	797,303
South Australia	1,592,488	..	1,592,488
Western Australia	2,194,746	3,945,341	6,140,087
Tasmania	509,166	349,401	858,567
Total	7,786,864	5,198,028	12,984,892

§ 3. State Trust Funds.

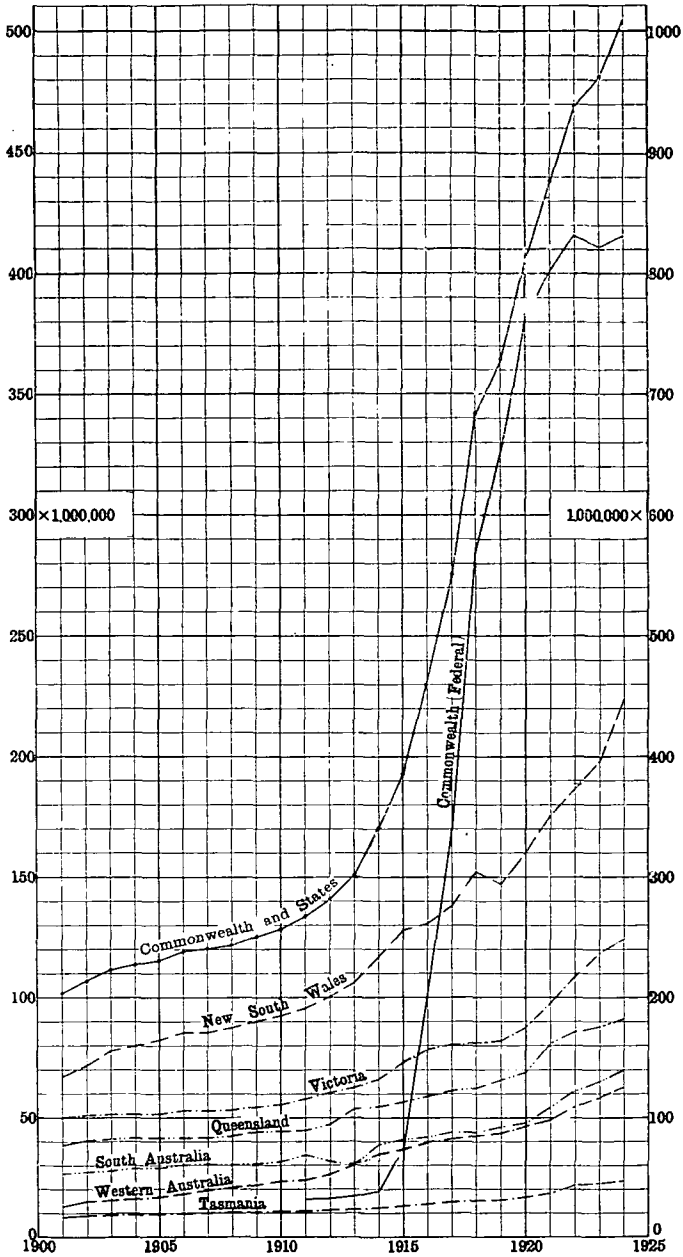
1. Nature.—In addition to the moneys received as revenue and paid to the credit of their respective Consolidated Revenue Funds, considerable sums are held by the State Governments in trust for various purposes. In most of the States also, sinking funds for the redemption of public debt are provided, and the moneys accruing thereto are paid to the credit of the appropriate trust funds. A similar course is followed in the case of municipal sinking funds placed in the hands of the Governments. In all the States except New South Wales, life assurance companies carrying on business are required to deposit a substantial sum in cash or approved securities with the Government, and these deposits help to swell the trust funds. Various other deposit accounts, superannuation funds, suspense accounts, etc., also find a place. The trust funds have at various times enabled the several State Treasurers to tide over awkward financial positions, but the propriety of allowing deficits to be liquidated in this manner is open to question.

2. Extent.—The amount of trust funds held on the 30th June, 1924, was as follows :—

STATE TRUST FUNDS, 30th JUNE, 1924.

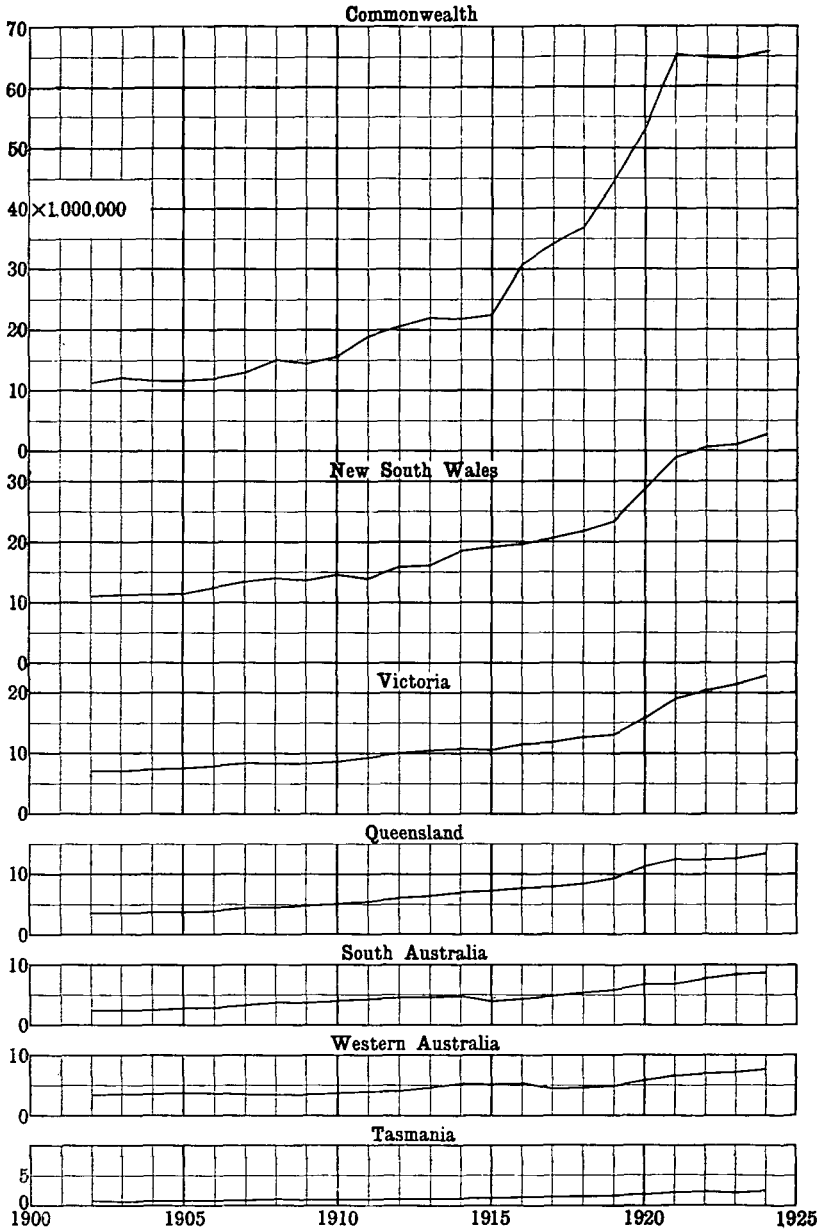
Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	All States.
	£	£	£	£	£	£	£
Amount of trust funds	19,666,636	7,852,923	Dr. 889,798	3,186,587	18,488,936	1,701,828	50,007,112

PUBLIC DEBT—COMMONWEALTH AND STATES, 1901 TO 1924.



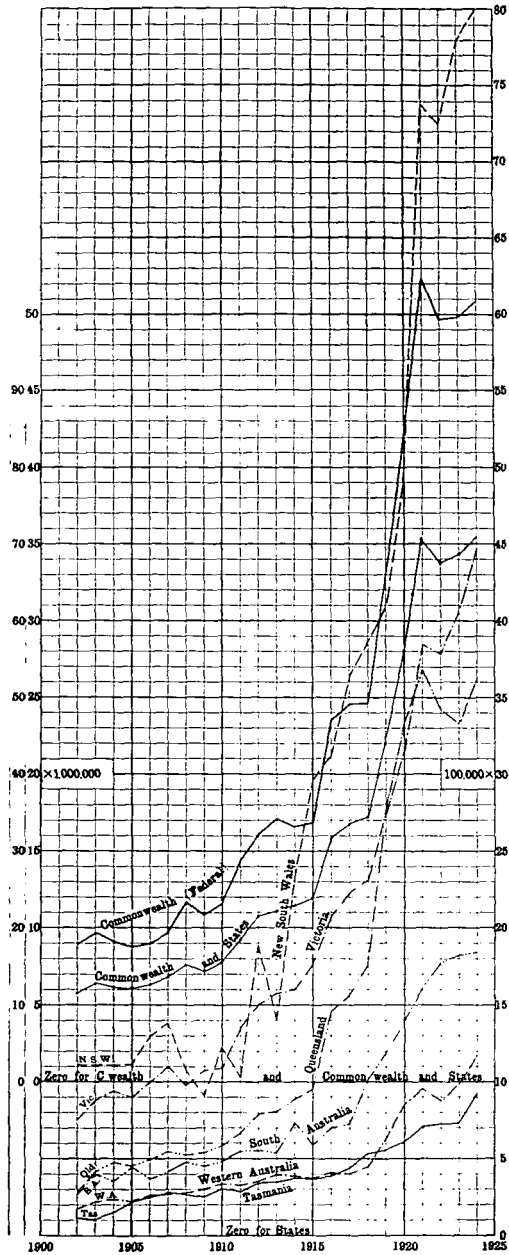
EXPLANATION.—The base of each small square represents an interval of one year, while the vertical height represents £10,000,000 in the case of the Commonwealth (Federal) and States Debts, the scale for which is on the left hand side, and £20,000,000 for Commonwealth and States combined, the scale for which is on the right hand. The Commonwealth (Federal) debt commenced in the year 1911.

CONSOLIDATED REVENUE—COMMONWEALTH AND STATES, 1902 TO 1924.



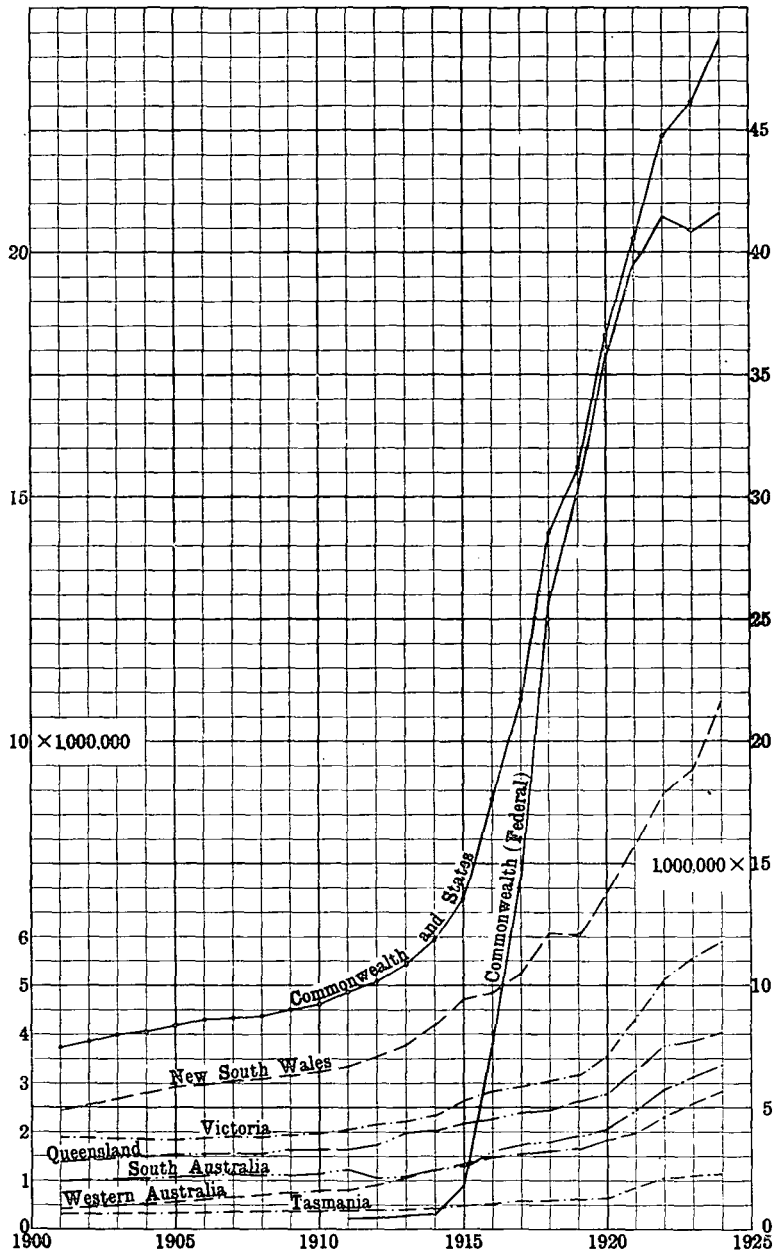
EXPLANATION.—The base of each small square represents an interval of one year, while the vertical height represents £5,000,000. The zero lines in each case are marked thus "0."

TAXATION.—COMMONWEALTH AND STATES, 1902 TO 1924.



EXPLANATION.—The base of each small square represents an interval of one year. Of the two scales on the left hand, the outer one is that for the Commonwealth and States combined, the vertical height of each square representing £2,000,000, and the inner one that for the Commonwealth (Federal), the vertical height representing £1,000,000. The scale on the right hand is that for the States, and the vertical height of each small square represents £100,000.

INTEREST ON PUBLIC DEBTS.—COMMONWEALTH AND STATES, 1901 TO 1924.



EXPLANATION.—The base of each small square represents an interval of one year, while the vertical height represents £500,000 in the case of the Commonwealth (Federal) and States, the scale for which is on the left hand side, and £1,000,000 in the case of the Commonwealth and States combined, for which the scale is on the right hand side.

§ 4. State Loan Funds.

Division I.—Loan Expenditure.

1. **General.**—So far back as the year 1842 revenue collections were supplemented with borrowed moneys, the earliest loan being by New South Wales for the purpose of assisting immigration, at rates of interest varying from $2\frac{1}{4}$ d. to $5\frac{1}{4}$ d. per £100 per diem, or approximately from $4\frac{1}{4}$ per cent. to 8 per cent. per annum. Australian public borrowing, however, is mainly due to the fact that the State Governments, in addition to ordinary administrative duties, undertake functions which in other countries are usually entrusted to local authorities or left to the initiative of private enterprise. Foremost amongst these are the construction and control of the railway systems, while loan moneys have largely been used for improvements to harbours and rivers, and the construction of water supply and sewerage works. The State loan expenditure and public debt thus differ very materially from those of most European countries, and also from those of the Commonwealth, where such expenditure was very largely incurred for purposes of defence, or absorbed in the prosecution of war. As shown above, the State debts consist chiefly of moneys raised and expended with the object of assisting the development of the resources of the country, and are, to a very large extent, represented by tangible assets.

2. **Loan Expenditure, 1923-24.**—For the year ended 30th June, 1924, State expenditure from loan funds was £29,414,190, Victoria with a total of £8,407,526 being the principal contributor to this amount. Expenditure on railways and tramways is a very heavy item, but in recent years the settlement of returned soldiers upon the land has absorbed large sums. Details for the year for each State are given in the following table :—

STATE LOAN EXPENDITURE, 1923-24.

Heads of Expenditure.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	All States.
	£	£	£	£	£	£	£
Railways and tramways ..	3,652,814	1,395,282	2,318,205	779,441	619,803	250,514	9,016,059
Water supply, sewerage, and water conservation	2,790,223	1,415,109	155,402	832,829	435,665	..	5,629,228
Harbours, rivers, etc. }	565,102	619,738	496,000	852,862	216,757	94,931	2,845,390
Roads and bridges }	..	..	..	..	..	..	..
Public buildings ..	499,264	359,511	287,726	132,439	88,595	41,289	1,366,246
Development of mines, etc. }	..	..	..	..	84,221	..	84,221
Advances to settlers ..	100,663	..	..	1,407,620	..	27,739	1,435,362
Land purchases for settle- ment ..	..	2,433,330	294,373	440,059	2,307,086	159,857	6,690,609
Loans to local bodies ..	4,659	..	676,291	..	..	37,187	718,137
Rabbit-proof fences ..	62,179	..	24,991	3,991	..	..	91,161
Other public works and purposes ..	60,576	62,184,556	397,211	2,815	184,706	414,275	2,973,130
Total ..	7,735,480	8,407,526	4,650,190	3,971,938	3,936,833	712,214	29,414,190

(a) Repayment.

(b) Including £2,090,091 for Electricity supply.

(c) Including £141,219 spent on Hydro-Electric scheme.

3. **Loan Expenditure, 1919-20 to 1923-24.**—The following table gives the loan expenditure during each of the years 1919-20 to 1923-24 :—

STATE LOAN EXPENDITURE, 1919-20 TO 1923-24.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	All States.
TOTAL.							
	£	£	£	£	£	£	£
1919-20	8,794,905	7,601,266	4,797,865	3,446,617	2,663,319	1,375,960	28,679,932
1920-21	14,701,028	11,095,158	4,251,248	1,826,841	2,586,404	2,717,452	37,178,131
1921-22	10,442,732	11,804,991	2,599,573	2,689,422	2,454,924	2,097,364	32,089,006
1922-23	9,794,019	8,764,306	3,701,750	3,480,281	3,389,299	1,153,645	30,283,300
1923-24	7,735,480	8,407,526	4,650,199	3,971,938	3,936,833	712,214	29,414,190

PER HEAD OF POPULATION.

	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1919-20	4 6 4	5 1 2	6 10 4	7 3 2	8 2 6	6 11 1	5 8 2
1920-21	7 0 7	7 5 3	5 13 3	3 14 5	7 16 1	12 15 6	6 17 4
1921-22	4 18 2	7 12 3	3 7 8	5 7 1	7 6 3	9 12 2	5 16 6
1922-23	4 10 2	5 10 3	4 13 11	6 15 8	9 17 4	5 5 5	5 7 6
1923-24	3 9 11	5 3 6	5 14 8	7 11 5	11 2 6	6 5 0	5 2 4

The loan expenditure per head of population varies in the different States and in different years, reaching its highest point for the five years under review in Tasmania in 1920-21 with £12 15s. 6d. per head, and its lowest in Queensland in 1921-22 with £3 7s. 8d. per head.

4. Total Loan Expenditure to 30th June, 1924.—(i) *General.* The total loan expenditure of the States from the initiation of borrowing to the 30th June, 1924, amounted to £559,674,209. The purposes for which this sum was expended are shown in the following table:—

TOTAL STATE LOAN EXPENDITURE TO 30th JUNE, 1924.

Heads of Expenditure.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	All States.
	£	£	£	£	£	£	£
Railways and tramways	110,172,735	64,704,193	49,828,206	23,424,655	19,888,771	6,846,689	274,955,249
Telegraphs and telephones	1,761,845	..	996,587	991,773	..	142,410	3,692,615
Water supply, sewerage and water conservation	39,246,240	17,660,034	1,190,245	15,057,357	6,046,653	..	79,800,529
Harbours, rivers, etc.	..	..	..	..	..	..	..
Roads and bridges	21,602,487	6,886,785	4,108,755	8,413,484	4,819,859	5,521,451	51,352,821
Defence	1,457,536	149,323	363,084	291,615	..	128,224	2,389,782
Public buildings	7,131,618	4,143,064	3,294,129	1,967,949	1,005,914	1,481,594	19,024,268
Immigration	569,930	20,000	2,763,070	..	448,257	235,000	4,036,257
Development of mines, etc.	..	510,454	..	5,111	2,013,672	..	2,529,237
Land purchases for settlement	6,047,000	27,709,427	2,878,341	1,867,572	12,339,233	3,056,750	70,980,410
Advances to settlers	776,604	1,131,558	..	14,897,360	..	281,565	17,081,027
Loans to local bodies	93,925	..	8,258,843	..	..	1,513,917	9,861,685
Rabbit-proof fences	230,417	..	..	201,530	328,703	..	760,650
Other public works and purposes	10,158,866	11,975,948	3,889,581	3,682,130	5,904,949	4,479,232	40,090,706
Total	199,240,203	134,980,786	77,560,841	71,400,536	52,796,011	23,686,832	559,674,209

The figures in the table show the amounts actually spent, and differ from those given later in the statements relating to the public debt, which represent the amount of loans still unpaid. The statement above includes all expenditure, whether the loans have been repaid or are still in existence. In the public debt statement, however, loans repaid are not included, and in the case of loans still outstanding each is shown according to the amount repayable at maturity, and not according to the amount originally available for expenditure.

(ii) *Relative Importance of Items.* The relative importance of the different items of loan expenditure is indicated in the following table, which gives the percentage of each loan on the total loan expenditure in each State and for the States as a whole to 30th June, 1924 :—

TOTAL STATE LOAN EXPENDITURE TO 30th JUNE, 1924.—PERCENTAGES OF ITEMS.

Heads of Expenditure.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	All States.
	%	%	%	%	%	%	%
Railways and tramways ..	55.29	48.00	64.24	32.81	37.67	28.91	49.12
Telegraphs and telephones ..	0.88	..	1.29	1.39	..	0.60	0.70
Water supply, sewerage, and water conservation ..	19.70	13.08	1.53	21.93	11.45	..	14.26
Harbours, rivers, etc. ..	10.84	5.10	5.30	11.78	9.13	23.31	9.18
Roads and bridges ..	..	..	..	..	..	..	..
Defence ..	0.73	0.11	0.47	0.41	..	0.54	0.43
Public buildings ..	3.58	3.07	4.25	2.76	1.91	6.26	3.40
Immigration ..	0.29	0.02	3.56	..	0.85	0.99	0.72
Development of mines, etc. ..	..	0.38	..	0.01	3.81	..	0.45
Land purchases for settlement ..	3.03	20.53	3.70	2.62	23.37	12.90	12.68
Advances to settlers ..	0.39	0.84	..	20.86		1.19	
Loans to local bodies ..	0.05	..	10.64	..	..	6.39	1.76
Rabbit-proof fences ..	0.12	..	..	0.28	0.62	..	0.14
Other public works and purposes ..	5.10	8.87	5.02	5.15	11.19	18.91	7.16
Total ..	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Division II.—State Public Debts.

1. *General.*—The first government loan raised in Australia was obtained by New South Wales in 1842. This and nine other loans prior to 1855 were all procured locally. In the last-mentioned year Australia approached the London market, the occasion being the placing of the first instalment of the New South Wales 5 per cent. loan for £683,300. Victoria first appeared as a borrower in 1854, and made its first appearance on the London market in 1859. In the other States the first public loans were raised in the following years :—Queensland 1861, South Australia 1854, Western Australia 1845, and Tasmania 1867.

2. *State Debts, 1920 to 1924.*—The table hereunder shows the State public debts and the amounts owing per head of population at the 30th June in each year from 1920 to 1924 inclusive. The totals include sums advanced by the Commonwealth to the States for settling returned soldiers on the land, and for this reason they differ in some cases from those given in previous issues.

STATE PUBLIC DEBTS, 30th JUNE, 1920 TO 1924.

Date.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	All States.
TOTAL.							
30th June, 1920 ..	£ 159,649,649	£ 98,273,123	£ 70,152,471	£ 48,565,562	£ 46,822,003	£ 16,830,039	£ 430,092,847
" 1921 ..	175,084,937	97,317,830	79,744,321	54,888,685	42,039,668	18,772,018	474,847,459
" 1922 ..	190,857,535	109,099,199	85,691,228	60,936,238	54,959,778	21,945,411	523,489,389
" 1923 ..	197,936,092	118,562,029	88,005,001	65,451,873	58,485,555	22,438,091	550,878,641
" 1924 ..	224,179,515	124,108,326	90,561,350	70,016,820	62,765,782	23,732,685	595,364,487

PER HEAD OF POPULATION.

	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
30th June, 1920 ..	77 4 3	58 7 9	93 14 1	99 16 9	141 16 3	79 8 10	80 4 5
" 1921 ..	83 5 11	63 7 5	103 18 8	110 7 3	146 19 8	83 11 11	87 0 10
" 1922 ..	88 17 1	69 9 6	109 7 2	120 14 0	161 12 4	102 17 8	94 0 4
" 1923 ..	90 5 6	73 15 0	109 4 9	125 15 9	163 0 1	104 19 2	96 16 11
" 1924 ..	100 10 3	75 13 9	109 8 9	132 7 10	174 3 7	111 6 4	102 11 9

The greatest increase in indebtedness was experienced in New South Wales, which added £84,529,866 during the period under review. During the period between 30th June, 1920, and 30th June, 1924, the public debt of the States increased by £165,271,640, or at the rate of about £41,300,000 per annum.

3. Place of Flotation of Loans.—(i) *For each State.* As pointed out previously the early loans, usually for comparatively small amounts, were raised locally, but, with the increasing demand for loan funds and the more favourable terms offering in the London market, the practice of raising loans in London came into vogue, and for many years local flotations, except for short terms or small amounts, were comparatively infrequent. In more recent years, however, the accumulating stocks of money in Australia seeking investment have led to the placing of various redemption and other loans locally, with very satisfactory results. Moreover, certain loans have been placed in New York on account of the Queensland and Tasmanian Governments. The following table gives particulars of loans outstanding on the 30th June, 1924, which had been floated abroad and in Australia respectively :—

STATE PUBLIC DEBTS.—PLACE OF FLOTATION OF LOANS, 30th JUNE, 1924.

State.	Floated Abroad.		Floated in Australia.		Total Public Debt.
	Amount.	Percentage on Total Debt.	Amount.	Percentage on Total Debt.	
	£	%	£	%	£
New South Wales ..	145,989,307	65.12	78,190,208	34.88	224,179,515
Victoria ..	48,551,314	39.12	75,557,012	60.88	124,108,326
Queensland ..	(a) 58,953,083	65.10	31,608,267	34.90	90,561,350
South Australia ..	33,328,773	47.60	36,688,056	52.40	70,016,829
Western Australia ..	42,932,680	68.40	19,833,102	31.60	62,765,782
Tasmania ...	(b) 12,905,265	54.38	10,827,420	45.62	23,732,685
Total ..	342,660,422	57.55	252,704,065	42.45	595,364,487

(a) Including £4,521,167, floated in New York.

(b) Including £144,015, floated in New York.

(ii) *Total, All States.* The next table showing similar particulars of aggregate State indebtedness at the end of the years 1919–20 to 1923–24, indicates the rapidity with which the local holdings have increased.

STATE PUBLIC DEBTS.—PLACE OF FLOTATION OF LOANS, 30th JUNE, 1920 TO 1924.

Year.	Floated Abroad.		Floated in Australia.		Total Public Debt.
	Amount.	Percentage on Total Debt.	Amount.	Percentage on Total Debt.	
	£	£	£	%	£
30th June, 1920 ..	266,307,448	61.92	163,785,399	38.08	430,092,847
„ 1921 ..	271,981,090	57.28	202,866,369	42.72	474,847,459
„ 1922 ..	300,274,441	57.36	223,214,948	42.64	523,489,389
„ 1923 ..	309,216,201	56.13	241,662,440	43.87	550,878,641
„ 1924 ..	342,660,422	57.55	252,704,065	42.45	595,364,487

In the course of four years the foreign indebtedness of the States has increased by £76,352,974, while the local indebtedness has increased by £88,918,666. In other words, the Australian proportion had on 30th June, 1924, grown to more than two-fifths.

The total indebtedness of the States increased during the year 1923-24 by £44,485,486, and is accounted for chiefly by the loans from the Commonwealth Government, which has either advanced money to the States, or acted as agent in obtaining loans from London. The sums raised have been largely spent in settling returned soldiers on the land, in constructing silos for wheat storage, and in providing employment through the medium of local bodies.

4. Rates of Interest.—(i) *At 30th June, 1924.* As mentioned previously, the highest rate of interest paid for the earliest State loans was fivepence farthing per £100 per diem, or, approximately, 8 per cent. per annum. At present the rates vary from 7½ per cent. to 3 per cent. It is probable, however, that the debt at the higher rates will largely increase in the future, since conversion can scarcely be effected at present at a lower rate of interest than 5 per cent. The average rate payable on the aggregate indebtedness is nearly 4½ per cent. For the separate States the average varies considerably, being lowest in the case of Queensland and highest in that of Tasmania, the difference between these two average rates being about ½ per cent. The table hereunder gives particulars of the rates of interest payable at the 30th June, 1924 :—

STATE PUBLIC DEBTS.—RATES OF INTEREST PAYABLE, 30th JUNE, 1924.

Rate of Interest.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Total.
%	£	£	£	£	£	£	£
7½ ..						144,015	144,015
7½ ..	2,311,068	586,414	830,976	513,564	1,380,000	268,649	5,890,671
7 ..			2,466,091	..	..	..	2,466,091
£6/15/2 ..	1,250,000	631,248	10,742	..	477,802	..	2,369,792
£6/14/- ..		..	..	..	500,000	19,280	519,280
6½ ..	6,500,000	101,786	3,130,650	3,000,000	250,000	3,436,540	16,317,190
£6/7/- ..	4,535,099	5,523,543	1,580,780	1,730,158	1,939,883	900,000	16,209,463
6¼ ..		127,794	..	..	..	164,644	266,430
6 ..	10,551,191	1,279,794	5,841,976	8,832,620	5,305,135	1,664,626	33,475,342
5½ ..	25,914,452	3,237,943	..	..	1,500,000	25,290	30,677,685
£5/13/2 ..		..	..	28,796	..	..	28,796
5½ ..	34,343,906	18,666,310	6,701,290	14,163,139	3,992,042	2,444,234	80,310,921
£5/6/11 ..	2,124,411	3,563,724	501,241	522,283	1,045,559	600,000	8,357,218
£5/5/3 ..	85,478	1,581,146	309,730	67,000	87,958	341,635	2,472,947
5¼ ..	5,662,131	6,847,830	1,973,730	1,399,301	347,535	..	16,230,527
5 ..	33,612,335	39,164,480	1,654,869	11,692,175	6,357,187	2,313,815	94,794,861
4¾ ..	..	350,000	..	..	..	..	350,000
4½ ..	..	335,980	..	1,000,000	..	..	1,335,980
£4/14/5 ..	7,400,000	3,900,000	..	2,706,000	3,100,000	1,000,000	18,106,000
4½ ..	19,268,534	3,184,198	16,016,123	496,262	5,592,573	363,649	44,921,339
4¼ ..	..	733,660	..	..	..	140,750	874,410
4 ..	21,141,994	5,851,755	21,044,809	7,486,291	9,572,618	4,634,620	69,732,087
3¾ ..	1,912,085	220,000	2,025,300	4,220,515	1,650,000	..	10,027,900
3½ ..	30,519,759	18,243,439	20,983,660	6,196,380	12,317,490	4,820,938	93,081,666
3 ..	17,047,072	10,105,076	5,489,383	5,962,345	7,350,000	450,000	46,403,876
Total ..	224,179,515	124,108,326	90,561,350	70,016,829	62,765,782	23,732,685	595,364,487
Average rate	£4/16/2	£4/15/1	£4/8/10	£4/16/11	£4/9/11	£4/17/10	£4/14/4

(ii) *All States, 1920 to 1924.* The rapid increase recently in the amounts bearing interest at the higher rates is exhibited in the table hereunder which shows the aggregate amount of indebtedness at the several rates of interest at the 30th June in each of the years 1920 to 1924 :—

STATE PUBLIC DEBTS.—RATES OF INTEREST PAYABLE 30th JUNE, 1920 TO 1924.

Rate of Interest.	30th June, 1920.	30th June, 1921.	30th June, 1922.	30th June, 1923.	30th June, 1924.
%	£	£	£	£	£
7½ .. .. .	..	100,090	122,123	144,015	144,015
7½ .. .. .	..	..	4,499,529	5,790,670	5,890,671
7 .. .. .	..	..	2,466,091	2,466,091	2,466,091
£6/15/2 .. .. .	..	..	2,369,792	2,369,792	2,369,792
£6/14/0 .. .. .	..	..	..	..	519,280
£6/13/10 .. .. .	..	123,991	..	..	..
6½ .. .. .	..	11,972,379	16,149,635	16,306,663	16,317,190
£6/7/- .. .. .	..	16,209,462	16,209,463	16,209,463	16,209,463
6½	461,795	5,100,770	8,651,849	5,696,341	266,430
6	2,241,800	6,545,219	30,630,929	29,807,617	33,475,342
5½	19,576,000	20,171,777	31,565,051	32,539,261	30,677,685
£5/13/2 .. .. .	..	28,796	28,796	28,796	28,796
5½	33,093,115	47,234,718	58,264,168	66,573,879	80,310,921
£5/6/11	8,377,014	8,357,218	8,357,218	8,357,218	8,357,218
£5/5/3	3,149,665	3,088,428	3,012,870	2,980,759	2,472,947
5½	22,460,909	24,272,989	24,111,789	24,082,463	16,230,527
£5/3/10	17,085	13,571	..	..	..
5	21,698,079	19,443,800	18,657,115	38,526,496	94,794,861
4½ .. .. .	..	..	1,000,000	1,050,000	350,000
4½	7,275,350	6,582,390	2,148,160	2,406,010	1,335,930
£4/14/5 .. .. .	..	..	..	18,000,000	18,106,000
£4/14/3	20,000	11,874	5,010	398	..
£4/13/10	93,247	..	..	..	..
4½	20,000	..	..	..	..
4½	30,113,383	29,236,033	29,966,961	38,823,200	44,921,339
4½	640,750	837,010	837,010	874,410	874,410
4½	18,000,000	18,000,000	18,000,000	..	..
4	90,463,298	86,904,348	84,773,988	77,444,696	69,732,087
3½	14,123,008	13,265,810	12,213,148	11,583,600	10,027,900
3½	111,963,434	111,123,493	103,420,420	102,811,575	93,081,666
3½	24,718	24,718	..	..	..
3	46,280,197	46,198,575	46,028,274	46,005,168	46,403,876
Total	430,092,847	474,847,459	523,489,389	550,878,641	595,364,487
Average rate	£4/3/1	£4/7/8	£4/12/0	£4/13/0	£4/14/4

The increase in the average rate started in 1912, but was accelerated by the war, which has virtually made 5 per cent. the present minimum rate of interest for gilt-edged securities. The figure is likely to rise for some time, since securities falling due in the future will probably have to be renewed at a higher rate of interest.

5. **Interest per Head.**—The relative burden of the State debts in respect of interest will be seen from the following table, which gives for the 30th June, 1924, the amount of interest payable on the public debt outstanding at that date, and the corresponding amount per head of population :—

STATE PUBLIC DEBTS.—INTEREST PAYABLE, 30th JUNE, 1924.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	All States.
	£	£	£	£	£	£	£
Total annual interest payable	10,783,185	5,898,632	4,023,593	3,393,218	2,820,425	1,161,066	28,080,119
Annual interest payable per head	£4/16/8	£3/11/11	£4/17/3	£6/8/4	£7/16/6	£5/8/11	£4/16/0

6. **Dates of Maturity.**—Whereas securities like the British Consols are interminable, Australian debts have in most cases a fixed date for repayment, there being a few exceptions which are included in the following table under the headings "interminable," "interminable at Government option," and "not yet fixed." The "interminable at Government

option" includes amounts which are payable by the respective Governments after giving a specified notice, and the "not yet fixed" consists of certain amounts owing to the Commonwealth Government. In most cases at date of maturity renewal is effected in respect of the greater portion of the loan, as provision for redemption has been made in exceptional cases only. In order to avoid application to the market at an unfavourable time, several States have adopted the practice of specifying a period prior to the date of maturity within which the Government, on giving twelve, or in some cases six months' notice, has the option of redeeming the loan. The Government can, therefore, take advantage of opportunities that may offer during the period for favourable renewals. Particulars concerning the due dates of the State loans outstanding on the 30th June, 1924, are given in the following table.

Those loans in the case of which the Government has the option of redemption during a specified period have been in each instance classified according to the latest date of maturity.

**STATE PUBLIC DEBTS.—DUE DATES OF AMOUNT OUTSTANDING
ON 30th JUNE, 1924.**

Year of Maturity.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Total.
	£	£	£	£	£	£	£
Overdue ..	17,963	5,580	..	..	..	..	23,543
1924 ..	18,205,397	6,673,496	13,008,834	3,522,156	442,920	486,755	42,339,558
1925 ..	11,782,006	12,497,837	12,021,000	10,055,054	3,871,460	2,064,641	52,292,000
1926 ..	7,202,941	6,105,367	963,300	4,081,189	2,172,695	881,501	21,407,083
1927 ..	18,051,676	4,848,265	4,343,750	6,662,720	5,681,320	1,714,531	41,302,262
1928 ..	1,165,611	12,334,162	487,100	2,101,936	161,650	1,247,895	17,498,354
1929 ..	1,106,589	9,082,913	93,100	2,476,046	555,000	1,270,985	14,584,633
1930 ..	8,924,184	4,297,745	4,577,200	1,089,082	..	133,134	14,021,345
1931 ..	3,485,242	1,388,638	..	66,851	..	210,760	5,151,491
1932 ..	14,214,200	2,031,366	..	13,170	1,168,995	35,075	17,462,806
1933 ..	17,838,022	332,960	..	2,340,028	951,220	350,500	21,813,630
1934 ..	14,247,721	6,773,749	485,030	2,429,901	1,616,643	..	25,553,044
1935 ..	17,598,465	..	..	1,561,550	8,408,185	142,750	27,710,950
1936 ..	92,150	300,000	2,925,650	5,201,330	1,240,000	6,000	9,765,130
1937 ..	98,700	40,000	..	16,400	..	6,698	161,798
1938 ..	84,450	..	2,362,697	101,440	865,285	..	3,413,852
1939 ..	2,900	312	..	2,734,050	106,603	..	2,843,865
1940 ..	16,506,014	4,248,900	2,000,000	6,014,861	4,500,000	7,810,022	41,079,797
1941 ..	5,100	324,380	2,928,391	..	..	38,647	3,294,518
1942 ..	4,008,100	14,485,100	15,000	6,650,300	61,697	1,150,000	26,370,197
1943 ..	765,700	3,600	..	1,037,925	756,100	..	2,563,325
1944 ..	252,900	400	..	..	..	..	253,300
1945 ..	11,006,015	1,856,943	7,557,009	798,812	5,895,527	200,000	27,314,306
1946 ..	..	217,400	..	..	..	250,000	467,400
1947 ..	3,200	..	6,553,769	..	2,250,000	..	8,806,969
1948 ..	6,500	..	..	..	..	..	6,500
1949 ..	2,900	11,699,271	..	..	..	..	11,702,271
1950 ..	22,061,870	11,886,075	10,108,937	2,861,801	5,431,202	4,929,564	57,279,449
1951 ..	..	..	999,600	..	..	..	999,600
1952 ..	3,100	..	125,400	..	..	..	128,500
1953 ..	6,500	..	2,147,809	..	..	..	2,154,309
1954 ..	2,900	123,874	..	..	..	..	126,774
1955 ..	22,001,500	..	..	..	4,437,000	..	26,438,500
1960 ..	..	2,979,700	2,000,000	3,000,000	1,000,000	..	8,979,700
1962 ..	10,500,000	..	..	..	6,000,000	..	16,500,000
1964 ..	..	..	..	..	1,566,000	..	1,566,000
1965 ..	..	..	..	..	3,000,000	..	3,000,000
1970 ..	..	..	2,000,000	..	..	..	2,000,000
Interminable ..	532,889	..	2,062,000	77,382	..	..	2,672,271
Interminable at Government option ..	7,395,208	5,498,834	..	5,122,845	..	..	18,016,887
Annual Drawings ..	..	..	71,132	..	31,300	..	102,432
Half-yearly ..	..	..	7,984,642	..	..	805,137	8,789,779
Date not fixed ..	..	4,071,359	2,740,000	..	595,000	..	7,406,359
Total ..	224,179,515	124,108,326	90,561,350	70,016,829	62,765,782	23,732,685	595,364,487

7. **Sinking Funds.**—The practice of providing sinking funds has been consistently adopted in the case of Western Australia only. This State has established, in connexion with each of its loans, sinking funds varying from 1 per cent. to 3 per cent. per annum of the nominal amount of the loan. The funds are placed with trustees in London, by whom they are invested in securities, and applied from time to time to the redemption of loans falling due. In the other States the sinking fund provision made is varied, consisting in certain instances of the revenues from specified sources, in others of the Consolidated Revenue Fund surplus, and in others again of fixed annual amounts. The following table gives the sinking funds and net indebtedness of each State at the 30th June, 1924 :—

STATE SINKING FUNDS AND NET INDEBTEDNESS, 30th JUNE, 1924.

State.	Gross Indebtedness.	Sinking Fund.	Net Indebtedness.	Net Indebtedness per Head.
	£	£	£	£
New South Wales ..	224,179,515	429,211	223,750,304	100 6 5
Victoria ..	124,108,326	3,560,225	120,548,101	73 10 4
Queensland ..	90,561,350	940,244	89,621,106	108 6 1
South Australia ..	70,016,829	2,496,931	67,519,898	127 13 5
Western Australia ..	62,765,782	9,373,572	53,392,210	148 3 4
Tasmania ..	23,732,685	1,108,621	22,624,064	106 2 4
Total ..	595,364,487	17,908,804	577,455,683	99 10 0

C. COMMONWEALTH AND STATE PUBLIC DEBTS.

The table hereunder, showing the public debts of the Commonwealth and the States, contains a column headed "deduction for debts counted twice." For each year this includes certain advances made by the Commonwealth to the States.

COMMONWEALTH AND STATE PUBLIC DEBTS, 1919-20 TO 1923-24.

Year ended 30th June.	Public Debt of Commonwealth.	Public Debt. of States.	Total Debt.	Deduction for Debts Counted Twice.	Balance, i.e., Public Debt of Australia.	Public Debt per Capita.
	£	£	£	£	£	£ s. d.
1920..	381,309,905	430,092,847	811,402,752	33,060,917	778,341,835	145 3 6
1921..	401,720,024	474,847,459	876,567,483	48,551,637	828,015,846	151 15 7
1922..	416,070,509	523,489,389	939,559,898	55,182,665	884,377,233	158 16 8
1923..	410,996,316	550,878,641	961,874,957	56,390,011	905,484,946	159 3 9
1924..	415,600,099	595,364,487	1,010,964,586	55,385,628	955,578,958	164 13 1

A series of graphs illustrating the rise in the revenue, public debt, and taxation of the Commonwealth and States since 1902, the year 1901-2 being the first complete financial year since Federation, accompanies this chapter.

D. PRIVATE FINANCE.

§ 1. Coinage.

1. *Australian Mints.*—(i) *General.* Soon after the discovery of gold in Australia steps were taken for the establishment of a branch of the Royal Mint in Sydney. The formal opening took place on the 14th May, 1855. The Melbourne branch was opened on the 12th June, 1872, and the Perth branch on the 20th June, 1899. The States of New South Wales, Victoria, and Western Australia provide an annual endowment in return for which the mint receipts are paid into the respective State Treasuries, and it might be said until recently that, apart from expenditure on buildings, new machinery, etc., the accounts paid into the Treasuries fairly balanced the mint subsidies. Early in 1923, however, it was announced that owing to losses incurred in the operations of recent years, the New South Wales Government had decided to close the Sydney branch at the end of 1923. This decision was, however, not carried out.

(ii) *Gold Receipts and Issues in 1924.* (a) *Assay of Deposits Received.* The deposits received during 1924 at the Sydney Mint reached a gross weight of 114,822 ozs.; at the Melbourne Mint, a gross weight of 109,222 ozs.; and at the Perth Mint, a gross weight of 614,032 ozs. The average composition of these deposits in Sydney was, gold 949.6, silver 33.2, base 17.2 in every 1,000 parts; Melbourne, gold 797.0, silver 143.3, base 59.7 in every 1,000 parts; and Perth, gold 792.3, silver 147.4, base 60.3 in every 1,000 parts.

(b) *Issues.* The Australian mints, besides issuing gold coin in the shape of sovereigns and half-sovereigns, also issue gold bullion, partly for the use of local manufacturers (jewellers and dentists), and partly for export, India taking a considerable quantity of gold cast into 10-oz. bars. During recent years the export was subject to regulation by the Commonwealth Government, but the embargo was lifted in 1925. The issues during 1924 are shown in the table below :—

AUSTRALIAN MINTS.—ISSUES OF GOLD, 1924.

Mint.	Coin.			Bullion.	Total.
	Sovereigns.	Half-sovereigns.	Total.		
	£	£	£	£	£
Sydney ..	394,000	..	394,000	19,901	413,901
Melbourne ..	278,140	..	278,140	101,347	379,487
Perth ..	1,464,416	..	1,464,416	616,148	2,080,564
Total ..	2,136,556	..	2,136,556	737,396	2,873,952

(c) *Withdrawals of Worn Coin.* The mints receive light and worn coin for recoinage. The total withdrawals of worn gold coin were as follows :—Sydney, £1,090,997; Melbourne, £865,392 (since and including 1890); Perth, £1,401.

(iii) *Total Gold Receipts and Issues.* (a) *Receipts.* The total quantities of gold received at the three mints since their establishment are stated in the gross as follows :—Sydney, 40,416,689.62 ozs.; Melbourne, 39,784,213.64 ozs.; and Perth, 30,165,666 ozs.

As the mints pay for standard gold (22 carats) at the rate of £3 17s. 10½d. per oz., which corresponds to a value of £4 4s. 11½d. per oz. fine (24 carats), it is possible to arrive at an estimate of the number of fine ounces from the amounts paid for the gold received. These amounts were:—Sydney, £149,805,746; Melbourne, £155,808,258; Perth, £105,018,587; corresponding to—Sydney, 35,267,270 ozs. fine; Melbourne, 36,679,987 ozs. fine; and Perth, 24,723,477 ozs. fine. In the case of deposits containing over a certain minimum of silver, the excess is paid for at the rate fixed from time to time by the Deputy-Master of the branch mint concerned.

(b) *Issues.* The total values of gold coin and bullion issued by the three mints are shown in the table hereunder. It may be said that about four-sevenths of the total gold production of Australasia has passed through the three Australian mints, the production of Australia to the end of 1924 being valued at £618,999,818, and that of New Zealand at approximately £93,300,000, or a total of about £712,299,818.

AUSTRALIAN MINTS.—TOTAL ISSUES OF GOLD TO END OF 1924.

Mint.	Coin.			Bullion.	Total.
	Sovereigns.	Half-sovereigns.	Total.		
	£	£	£	£	£
Sydney ..	137,772,500	4,781,000	142,553,500	7,206,824	149,760,324
Melbourne ..	142,464,953	946,780	143,411,733	12,395,923	155,807,656
Perth ..	95,820,212	367,338	96,187,550	8,817,032	105,004,582
Total ..	376,057,665	6,095,118	382,152,783	28,419,779	410,572,562

(iv) *Silver and Bronze Coinage.* (a) *Prices of Silver.* The value of silver has greatly decreased since its demonetization and restricted coinage in almost the whole of Europe. A noticeable increase, however, took place for some years after 1915, the price of silver following the general trend of world prices. Its average price in the London market in recent years is shown in the table in Chapter XXI. Mineral Industry.

(b) *Profits on Coinage of Silver.* As sixty-six shillings are coined out of one pound troy of standard silver, the silver required to produce £3 6s. of coin was only worth on the average about £1 12s. 1d. during 1923–24, the difference represents, therefore, the gross profit or seigniorage made on the coinage of every £3 6s. Negotiations took place for a number of years between the Imperial authorities and the Governments of New South Wales and Victoria, and in 1898, resulted in permission being granted to the two Governments named to coin silver and bronze coin at the Sydney and Melbourne Mints for circulation in Australia. No immediate steps were, however, taken in the matter, and as section 51 of the Commonwealth Constitution makes legislation concerning “currency, coinage, and legal tender” a Federal matter, the question remained in abeyance until the latter part of 1908, when the Commonwealth Treasurer announced his intention of initiating the coinage. Since 1916 silver and bronze coins have been minted in Australia on behalf of the Commonwealth Treasury.

(c) *Silver and Bronze Issues.* The total issues of silver and bronze coinage on account of the Commonwealth since 1910 as obtained from returns furnished by the Treasury, are set out in the following table:—

AUSTRALIAN MINTS.—SILVER AND BRONZE ISSUES, 1910 TO 1924.

Year.	Silver.					Bronze.		
	2/-.	1/-.	6d.	3d.	Total.	1d.	½d.	Total.
	£	£	£	£	£	£	£	£
1910-18 ..	1,730,950	1,138,600	303,700	295,100	3,468,350	92,220	42,950	135,170
1919 ..	98,600	48,900	28,500	37,725	213,725	29,204	9,930	39,134
1920 ..	94,800	93,000	54,800	53,775	296,375	33,320	8,555	41,875
1921 ..	118,300	58,400	72,500	82,900	332,100	30,779	10,525	41,304
1922 ..	129,100	37,400	40,400	40,650	247,550	31,770	4,400	36,170
1923 (30th June)	59,850	35,900	13,100	7,000	106,850	9,650	370	10,020
1923-24 ..	146,200	58,800	25,400	29,250	259,650	30,650	4,560	35,210
Total ..	2,368,800	1,471,000	538,400	546,400	4,924,600	257,593	81,290	338,883

(d) *Withdrawals of Worn Silver Coin.* The value of worn silver coins received during 1924 was as follows:—Sydney, £74,400; Melbourne, £84,597; Perth, £8,136. The total withdrawals of worn silver coin were:—Sydney, £1,159,172; Melbourne, £903,128; Perth, £77,606.

(v) *Standard Weight and Fineness of Coinage.* The coinage of Australia, so far as the coins minted are concerned, is the same as that of the United Kingdom, and the same provisions as to legal tender apply, viz., gold coins are legal tender to any amount, silver for an amount not exceeding forty shillings, and bronze up to one shilling. As will be seen from the table below, the standard weights of the sovereign and half-sovereign are respectively 123.27447 grains and 61.63723 grains, but these coins will pass current if they do not fall below 122.5 grains and 61.125 grains respectively.

AUSTRALIAN COINAGE—STANDARD WEIGHT AND FINENESS.

Denomination.	Standard Weight.	Standard Fineness.
	Grains.	
GOLD—		
Sovereign ..	123.27447	} Eleven-twelfths fine gold, viz. :— Gold .. 0.91667 } 1.00000 Alloy .. 0.08333
Half-sovereign ..	61.63723	
SILVER—		
Florin ..	174.54545	} Thirty-seven-fortieths fine silver, viz. :— Silver .. 0.925 } 1.000(a) Alloy .. 0.075
Shilling ..	87.27272	
Sixpence ..	43.63636	
Threepence ..	21.81818	
BRONZE—		
Penny ..	145.83333	} Mixed metal, viz. :— Copper .. 0.95 } 1.00 Tin .. 0.04 Zinc .. 0.01
Halfpenny ..	87.50000	

(a) The fineness of Australian silver coins is still 925, but since December, 1920, the fineness of British silver coins has been reduced to 500.

§ 2. Cheque-Paying Banks.

1. *Banking Legislation.*—(i) *Commonwealth Legislation.* Under Section 51 of the Commonwealth Constitution Act the Commonwealth Parliament has power to legislate with respect to "Banking, other than State banking, also State banking extending beyond the limits of the State concerned, the incorporation of banks, and the issue of paper money." Legislation under this authority comprises the following Acts: No. 27 of 1909, dealing with Bills of Exchange, Cheques, and Promissory Notes; No. 11 of 1910, dealing with Australian Notes; and No. 14 of 1910, a Bank Notes Tax Act. The Notes Act and the Bank Notes Tax Act were supplemented in the following year by the passing of No. 18

of 1911, "An Act to provide for a Commonwealth Bank," which passed both Houses and was assented to on 22nd December, 1911. Some account of the foundation of the Bank appeared in No. 6 to No. 10 issues of the *Official Year Book*.

As the initial expenses of the bank were heavy, the early operations resulted in a small loss, but with the increasing prosperity of the institution the early deficit was gradually reduced, until on 30th June, 1915, it was entirely extinguished. The following table shows the aggregate net profits from the initiation of the bank to the end of each of the last five financial years:—

COMMONWEALTH BANK.—AGGREGATE PROFITS, 1920 TO 1924.

Date.	Aggregate Net Profits to Date.		
	General Bank.	Savings Bank.	Total.
	£	£	£
30th June, 1920	2,426,067	330,038	2,756,105
„ 1921	3,082,249	369,116	3,451,365
„ 1922	3,577,317	424,342	4,001,659
„ 1923	3,869,219	534,768	4,403,987
„ 1924	3,964,620	690,053	4,654,673

In accordance with the provisions of section 30 of the Bank Act and section 9 (2) of the National Debt Sinking Fund Act, half of the net profits of the Bank have been placed to the credit of the Bank's Reserve Fund and half to the credit of the National Debt Sinking Fund.

The Commonwealth Bank Act 1924 was assented to on 20th August, 1924. This Act was passed to broaden the scope of the Commonwealth Bank and to enable it to perform the functions for which it had been established. Five main amendments to the Bank Act 1911-20 are included:—(1.) Appointment of a Board of Directors to control not only the general business, but also that of the note issue. The Board consists of the Governor of the Bank, the Secretary to the Treasury, and six others who are or have been actively engaged in agriculture, commerce, finance or industry. In addition to the above Board there is a Board of Advice in London. (2.) Strengthening the bank by the provision of further capital. It is proposed to capitalize £4,000,000 of the accumulated profits and to authorize the Treasurer to raise by loan sums aggregating £6,000,000 and to lend the proceeds to the Commonwealth Bank as additional capital. The Ministry does not propose to interfere with the authority already included in the Commonwealth Bank Act to issue debentures up to £10,000,000. (3.) The Board is to fix and publish its discount rate. (4.) The associated banks are required to settle their exchanges through the Commonwealth Bank. (5.) The associated banks are required to supply to the Treasurer each quarter a statement of average weekly liabilities and assets in accordance with the schedule prescribed.

(ii) *State Legislation.* The Acts under which the various banks are incorporated differ somewhat. While most of the older banks were incorporated by special Act or Charter, e.g., the Bank of New South Wales, by Act of Council 1817; the Bank of Australasia, by Royal Charter; the Bank of Adelaide, by Act of the South Australian Parliament; and the Bank of New Zealand, by Act of the General Assembly of New Zealand, the newer banks are generally registered under a "Companies Act," or some equivalent Act. This is also the case with those banks which, after the crisis of 1893, were reconstructed.

(iii) *Australian Note Issue.* In December, 1920, the Australian Note Issue was handed over to the control of the Commonwealth Bank, the notes, however, still remaining Treasury Notes. The Note Issue Department of the Bank is administered by a Board including the Governor and Secretary of the Bank, a leading Treasury official, and two outside financial experts. The notes in circulation on 30th June, 1924, amounted to £56,890,225, of which approximately 61 per cent. was held by the Banks and 93 per cent. by the public. Against this there was a reserve of gold coin amounting

to £24,441,276, or nearly 43 per cent., and other assets including investments of £32,448,949. The investments are set out in detail as follows:—

AUSTRALIAN NOTES ACCOUNT.—PARTICULARS OF INVESTMENTS AS AT 30th JUNE, 1924.

Investment.	Amount.	Rate of Interest.	Date of Maturity.	Annual Amount of Interest.
	£	%		£
Commonwealth Inscribed Stock	3,014,716	3½	1/4/62 to 1/4/72	105,515
Commonwealth Inscribed Stock	5,584,700	6	31/5/25 to 15/12/30	335,082
Commonwealth War Loan	63,640	4½	15/12/25	2,864
New South Wales Treasury Bills	7,400,000	4/14/5	1925	349,354
Victorian Debentures (face value £250,000)	245,000	5½	1/7/24 to 1/7/26	13,750
Victorian Debentures	3,900,000	4/14/5	1925	184,119
Victorian Inscribed Stock	583,000	5½	(a)	160,875
Queensland Securities	1,490,000	5½	(a)	78,225
South Australian Treasury Bills (face value £2,706,000)	2,600,000	4/14/5	1925	127,750
South Australian Securities	326,000	6	(a)	19,500
Western Australian Stock	590,000	3½	1/1/26	22,125
Western Australian Treasury Bills	3,100,000	4/14/5	1925	146,351
Western Australian Securities	335,000	5½	(a)	17,587
Tasmanian Inscribed Stock	100,000	5½	1/10/24 to 1/10/25	5,500
Tasmanian Treasury Bills	1,000,000	4/14/5	1925	47,210
Tasmanian Securities	469,000	5½	(a)	24,622
Total	(b)30,801,056	..	..	1,640,489

(a) Not yet fixed.

(b) Exclusive of other assets amounting to £1,647,892.

2. **Banks in Operation.**—The nineteen banks trading in Australia at the 30th June, 1924, are arranged in the table hereafter according to the situation of their head offices. Where reference to the banks is made by name they will be dealt with in the order thus given, with the exception of the Commonwealth Bank, which is placed first:—

CHEQUE-PAYING BANKS AT 30th JUNE, 1924.

Bank.	Head Office.
Commonwealth Bank of Australia	Sydney
Joint Stock Banks—	
Bank of Australasia	London
Union Bank of Australia Limited .. .. .	..
English, Scottish, and Australian Bank Limited .. .. .	..
Bank of New South Wales	Sydney
Commercial Banking Company of Sydney Limited .. .. .	..
Australian Bank of Commerce Limited .. .. .	..
Primary Producers' Bank of Australia Limited .. .. .	..
National Bank of Australasia Limited	Melbourne
Commercial Bank of Australia Limited .. .. .	..
Bank of Victoria Limited .. .. .	..
Royal Bank of Australia Limited .. .. .	..
Ballarat Banking Company Limited	Ballarat
Queensland National Bank Limited	Brisbane
Bank of Adelaide	Adelaide
Western Australian Bank	Perth
Bank of New Zealand	Wellington
Comptoir National d'Escompte de Paris	Paris
Yokohama Specie Bank Limited	Yokohama

Amalgamations, which have been such a feature in British banking of late years, have also been effected in Australia, the number of competitive joint-stock banks being thereby reduced considerably. During the calendar years 1917 and 1918 the following were recorded:—(a) the Royal Bank of Queensland Limited with Bank of North Queensland Limited; (b) City Bank of Sydney with Australian Bank of Commerce Limited; (c) National Bank of Tasmania Limited with Commercial Bank of Australia Limited; and (d) National Bank of Australasia Limited with Colonial Bank of Australasia Limited. A further amalgamation took place in August, 1920, viz., the London Bank of Australia Ltd. and the English, Scottish and Australian Bank Ltd., and these banks absorbed the Commercial Bank of Tasmania in May, 1921. The National Bank of Australasia also absorbed the Bank of Queensland.

3. **Capital Resources.**—The paid-up capital of the cheque-paying banks, together with their reserve funds, the rate per cent., and the amount of their last dividends, are shown in the table hereunder. The information relates to the balance-sheet last preceding the 30th June, 1924. In regard to the reserve funds it must be noted that in the case of some of the banks these are invested in Government securities, while in other cases they are used in the ordinary business of the banks, and in a few instances they are partly invested and partly used in business:—

CHEQUE-PAYING BANKS.—CAPITAL RESOURCES, 30th JUNE, 1924.

Bank.	Paid-up Capital.	Rate per cent. per annum of last Dividend and Bonus.	Amount of last Half-yearly Dividend and Bonus.	Amount of Reserved Profits.
	£	%	£	£
Commonwealth Bank of Australia ..	..	..	..	4,465,660
Joint Stock Banks—				
Bank of Australasia	4,000,000	10 and Bonus 3	260,000	3,745,427
Union Bank of Australia Ltd. ..	3,000,000	15	225,000	3,439,712
English, Scottish and Australian Bank Ltd.	1,500,000	12½	178,494	1,732,600
Bank of New South Wales	6,000,000	10	150,000(a)	4,213,159
Commercial Banking Coy. of Sydney Ltd.	3,476,288	10	157,128	2,668,489
Australian Bank of Commerce Ltd. ..	1,200,000	7	42,000	370,265
Primary Producers' Bank of Australia Ltd.	199,333	..	..	975
National Bank of Australasia Ltd. ..	3,690,880	10	161,250	2,133,176
Commercial Bank of Australia Ltd. ..	2,626,928	4 Pref., 15 Ord.	68,712	144,786
Bank of Victoria Ltd.	1,478,010	9	66,510	757,854
Royal Bank of Australia Ltd.	750,000	10	37,500	601,001
Ballarat Banking Coy. Ltd.	127,500	8	5,100	63,484
Queensland National Bank Ltd. ..	1,150,048	10	27,671(a)	536,705
Bank of Adelaide	875,000	10	43,750	778,024
Western Australian Bank	392,288	20	37,800	845,540
Total Australian Banks	30,466,275	..	1,460,915	26,496,857
Bank of New Zealand	5,029,989	10 Pref., 13½ Ord.	487,307(b)	2,831,514
Comptoir National d'Escompte de Paris ..	10,000,000	11	1,100,000(b)	3,093,817
Yokohama Specie Bank Ltd.	10,000,000	12	600,000	7,962,036
Grand Total	55,496,264	..	3,648,222	40,384,224

(a) Dividend for quarter.

(b) For twelve months.

4. **Liabilities and Assets.**—(i) *Liabilities, each State, Quarter ended 30th June, 1924.* Banks transacting business in any State are obliged, under the existing State laws, to furnish a quarterly statement of their assets and liabilities, which contains the averages of the weekly statements prepared by the bank for that purpose, and they have since the year 1908 furnished quarterly statements to the Commonwealth Statistician. As all other financial returns in this work generally refer to a period closing on the 30th June, the banking figures are given throughout for the June quarter of each year. The liabilities are those to the general public, and are exclusive of the banks' liabilities to their shareholders, which are shown in the preceding table. As the Commonwealth Bank also engages in Savings Bank business, it has been deemed desirable to keep the figures for this bank separate from those of the Joint Stock banks. The figures set out in the tables which follow are, therefore, exclusive in every case of the Commonwealth Bank.

JOINT STOCK BANKS—LIABILITIES, JUNE QUARTER, 1924.

State.	Notes in Circulation not Bearing Interest.	Bills in Circulation not Bearing Interest.	Balances Due to Other Banks.	Deposits.			Total Liabilities.
				Not Bearing Interest.	Bearing Interest.	Total.	
	£	£	£	£	£	£	£
New South Wales	66,581	1,041,565	1,325,268	43,764,872	46,765,049	90,529,921	92,963,335
Victoria ..	87,278	385,374	1,160,104	33,194,062	51,107,426	84,301,488	85,937,244
Queensland ..	(a)	712,651	295,948	13,398,567	16,250,997	29,649,564	30,658,193
South Australia ..	23,165	93,141	853,046	8,172,008	11,012,305	20,085,213	21,054,565
Western Australia ..	25,448	151,710	246,351	5,041,013	4,195,742	9,236,755	9,660,264
Tasmania ..	2,353	52,385	150,674	2,730,483	2,931,011	5,661,494	5,866,911
Northern Territory	..	29	5,782	76,931	110,490	187,421	193,232
Total ..	204,830	2,439,885	4,037,173	106,378,836	133,273,020	239,651,856	246,333,744

(a) In Queensland, Treasury Notes were used instead of bank notes.

(ii) *Liabilities, all States, June Quarters, 1920 to 1924.* In the next table, which shows the average liabilities of the Joint Stock Banks for the quarters ended 30th June, 1920 to 1924, for Australia as a whole, the growth in liabilities is almost entirely due to an increase in the deposits, in which deposits not bearing interest and deposits bearing interest have both shared, although the latter show by far the larger proportion.

JOINT STOCK BANKS—LIABILITIES, JUNE QUARTER, 1920 TO 1924.

Year.	Notes in Circulation not Bearing Interest.	Bills in Circulation not Bearing Interest.	Balances Due to Other Banks.	Deposits.			Total Liabilities.
				Not Bearing Interest.	Bearing Interest.	Total.	
	£	£	£	£	£	£	£
1920 ..	224,130	2,173,552	4,330,439	114,287,669	102,775,452	217,063,121	223,791,242
1921 ..	213,868	2,207,959	5,602,725	111,822,644	109,718,452	221,541,096	229,565,648
1922 ..	209,894	2,132,280	4,273,238	104,582,491	117,776,754	222,359,245	228,974,657
1923 ..	207,228	2,279,149	3,724,411	108,937,936	131,903,047	240,840,983	247,051,771
1924 ..	204,830	2,439,885	4,037,173	106,378,836	133,273,020	239,651,856	246,333,744

(iii) *Assets, each State, Quarter ended 30th June, 1924.* The average assets of the banks are shown in the following table:—

JOINT STOCK BANKS.—ASSETS, JUNE QUARTER, 1924.

State.	Coined Gold and Silver and other Metals.	Gold and Silver in Bullion or Bars.	Government and Municipal Securities.	Landed and House Property.	Notes and Bills of other Banks.	Balances Due from other Banks.	Discounts, Over-drafts, and all other Assets.	Australian Notes.	Total Assets.
	£	£	£	£	£	£	£	£	£
N.S.W.	9,133,750	389,421	7,554,519	2,650,400	668,451	2,030,478	78,861,693	8,006,009	100,294,721
Victoria	5,367,063	35,790	2,595,209	1,639,793	792,834	2,043,725	63,914,412	7,859,885	84,248,711
Q'land	1,824,405	5,929	802,340	1,859,274	303,207	142,569	26,076,079	2,618,545	32,832,348
S. Aust.	1,653,388	167	153,127	423,818	129,345	431,209	14,310,376	2,435,856	19,542,286
W. Aust.	914,230	138,561	125,514	306,654	122,062	201,364	10,748,734	1,427,999	13,985,118
Tasmania	571,313	71	..	177,096	21,330	51,853	4,831,856	593,101	6,246,620
Nor. Ter.	4,308	920	..	600	6	..	7,625	3,455	16,914
Total	19,473,457	570,859	11,230,709	6,057,635	2,037,235	4,901,198	193,750,775	22,944,850	265,966,718

(iv) *Assets, all States, June Quarters, 1920 to 1924.* The average assets of the banks for the June quarters of each of the years 1920 to 1924 are given below.

JOINT STOCK BANKS.—ASSETS, JUNE QUARTERS, 1920 TO 1924.

Year.	Coin and Silver and Other Metals.	Gold and Silver in Bullion or Bars.	Landed and Other Property.	Notes and Bills of Other Banks.	Balances Due from Other Banks.	Discounts, Overdrafts, and all Other Assets.(a)	Australian Notes.	Total Assets.
	£	£	£	£	£	£	£	£
1920	19,056,163	602,402	4,964,753	1,823,819	4,341,734	168,875,884	31,499,464	231,164,219
1921	19,219,429	549,847	5,112,203	1,467,015	3,294,237	193,301,301	29,570,072	252,514,104
1922	19,010,983	541,200	5,292,681	1,762,379	3,114,741	183,331,660	25,584,150	238,637,794
1923	18,716,480	559,004	5,721,410	1,920,488	5,390,423	203,526,917	25,037,449	260,872,121
1924	19,473,457	570,859	6,057,635	2,037,235	4,901,198	209,981,484	22,944,850	265,966,718

(a) Including Government and Municipal securities, and Australian notes.

The increase in assets is mainly due to advances, and the growth in 1921 is almost exactly accounted for by increases in this respect, largely on account of the action of the banks in financing wheat and other commodities awaiting shipment and in assisting individuals to invest in war loans.

5. Percentage of Coin, Bullion, and Australian Notes to Liabilities at Call.—

(i) *General.* Although it is not strictly correct to assume that the division of deposits into those bearing interest and not bearing interest would in every case coincide with a division into fixed deposits and current accounts, the division, in default of a better one, is adopted, and in the following table "liabilities at call" are therefore understood to include the note circulation of the banks and the deposits not bearing interest. Since 1912, however, the former item has steadily decreased, and is now almost negligible as compared with the latter.

JOINT STOCK BANKS.—PERCENTAGE ON LIABILITIES OF COIN, BULLION, AND AUSTRALIAN NOTES, 1920 TO 1924.

Year.	Liabilities at Call.	Coin, Bullion, and Australian Notes.	Percentage on Liabilities at Call.
	£	£	%
1920	114,511,799	51,158,029	44.67
1921	112,036,512	49,339,348	44.04
1922	104,792,385	45,136,333	43.07
1923	109,145,164	44,312,883	40.60
1924	106,583,666	42,989,166	40.33

The figures in the last column show that the banks generally consider it advisable to hold from 40 to 45 per cent. of the amount of liabilities at call in coin, bullion, and notes.

(ii) *Queensland Treasury Notes.* In Queensland, Treasury notes took the place of bank notes in 1893. These Treasury notes are disregarded in the quarterly statements of the banks; according to Treasury returns the amount outstanding on 30th June, 1924, was £22,912. Under the Australian Notes Act, previously referred to, the issue of notes by a State is now prohibited.

(iii) *Percentage in each State.* The proportion of coin, bullion, and Australian notes to liabilities at call varies considerably amongst the States, and sometimes in the same State from year to year. A table is appended showing the percentage for each State for the quarter ended 30th June in each of the years 1920 to 1924 :—

JOINT STOCK BANKS.—PERCENTAGE ON LIABILITIES OF COIN, BULLION, AND AUSTRALIAN NOTES, 1920 TO 1924.

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N. Ter.	All States.
	%	%	%	%	%	%	%	%
1920 ..	45.96	40.20	45.87	50.75	53.93	42.89	14.41	44.67
1921 ..	43.43	45.38	34.29	49.51	54.34	56.55	13.64	44.04
1922 ..	40.79	44.61	32.95	57.26	54.99	52.38	14.51	43.07
1923 ..	39.46	40.82	31.54	54.32	50.68	45.54	10.96	40.60
1924 ..	39.99	39.85	33.20	49.96	48.96	42.61	11.29	40.33

6. *Deposits and Advances.*—(i) *Deposits.* The amount and average per head of population of deposits held by the banks during each of the last five years are given hereunder.

JOINT STOCK BANKS.—DEPOSITS, 1920 TO 1924.

Year	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	N. Ter.	All States.
TOTAL.								
	£	£	£	£	£	£	£	£
1920 ..	81,246,318	76,240,023	26,416,378	18,141,773	8,867,514	5,897,148	253,967	217,063,121
1921 ..	85,932,190	75,524,209	26,063,176	18,969,502	8,879,346	5,943,048	229,619	221,541,096
1922 ..	86,960,221	76,546,572	26,655,927	18,499,834	8,523,244	4,988,004	185,443	222,359,245
1923 ..	94,079,939	85,135,739	28,442,137	18,486,453	9,185,087	5,333,688	177,910	240,840,983
1924 ..	90,529,321	84,301,488	29,649,564	20,085,213	9,236,755	5,661,494	187,421	239,651,856

PER HEAD OF POPULATION.

	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1920 ..	39 7 0	50 10 6	35 10 5	37 7 5	26 18 5	28 1 2	59 19 8	40 12 0
1921 ..	40 17 0	49 5 0	34 4 6	38 4 7	26 13 0	27 18 6	58 18 2	40 15 10
1922 ..	40 10 7	48 17 1	34 4 9	36 13 10	25 2 10	23 5 8	50 7 0	40 1 0
1923 ..	42 19 4	53 1 6	35 11 2	35 16 8	26 9 5	24 16 3	49 3 2	42 8 9
1924 ..	40 13 4	51 9 0	36 1 7	38 1 3	25 15 5	26 8 6	52 1 6	41 7 9

(ii) *Advances.* In the quarterly statements furnished by the banks, the column headed "all other debts due to the banks" is made up of such miscellaneous items as bills discounted, promissory notes discounted, overdrafts on personal security, overdrafts secured by deposit of deeds or by mortgage, etc. The form prescribed for quarterly returns furnished to the Commonwealth Statistician in 1908 and 1909 provided for a division of the amounts under this heading into a number of sub-headings, but all the banks were not in a position to make the necessary division, and as it is impossible to separate these items the totals in the column must, therefore, be treated as advances. The following table shows the totals for each State during the years 1920 to 1924.

JOINT STOCK BANKS.—ADVANCES, 1920 TO 1924.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	N. Ter.	All States.
	£	£	£	£	£	£	£	£
1920 ..	60,796,144	44,092,848	20,854,200	10,298,159	9,672,634	3,845,181	16,108	149,575,272
1921 ..	73,244,709	55,681,441	22,158,802	12,787,356	9,883,544	4,760,431	22,852	178,539,136
1922 ..	67,724,902	53,151,759	21,173,091	12,246,704	9,571,052	4,226,561	12,742	168,106,871
1923 ..	74,737,819	61,055,847	23,361,167	14,234,371	10,107,456	4,732,433	6,455	188,235,548
1924 ..	78,861,693	63,914,412	26,076,079	14,310,376	10,748,734	4,831,856	7,625	198,750,775

(iii) *Proportion of Advances to Deposits.* The percentage of advances on total deposits shows to what extent the needs of one State are supplied by the resources of another State, and, where the percentage for Australia as a whole exceeds 100 (as it did in the early years of the century), the banks must have supplied the deficiency from their own resources, or from deposits obtained outside Australia. The following figures show, however, that the banking business of Australia has been self-contained in every State, except Western Australia, during the period under review :—

**JOINT STOCK BANKS.—PERCENTAGE OF ADVANCES ON DEPOSITS,
1920 TO 1924.**

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Nor. Ter.	All States.
	%	%	%	%	%	%	%	%
1920 ..	74.83	57.83	78.94	56.76	109.08	65.20	6.34	68.91
1921 ..	85.24	73.73	84.99	67.41	111.31	80.10	9.95	80.59
1922 ..	77.88	69.44	79.43	66.20	112.29	84.73	6.87	75.60
1923 ..	79.44	71.72	82.14	77.00	110.04	88.73	3.63	78.16
1924 ..	87.11	75.82	87.95	71.25	116.37	85.35	4.07	82.93

7. *Commonwealth Bank of Australia.*—(i) *Liabilities, June Quarter, 1924.*—On account of the magnitude of the Savings Bank business of this bank, the figures have been separated from those of the Joint Stock banks, and are shown hereunder. The total deposits amounted to £68,178,054, of which Savings Bank deposits accounted for £38,273,478 or 56 per cent.

COMMONWEALTH BANK OF AUSTRALIA.—LIABILITIES, JUNE QUARTER, 1924.

States and Territory.	Bills in Circulation.	Balances Due to Other Banks.	Deposits.				Total Liabilities.
			Not Bearing Interest.	Bearing Interest.	Savings Bank Deposits.	Total Deposits.	
	£	£	£	£	£	£	£
New South Wales	54,688	3,248	8,790,623	1,825,675	7,693,565	18,309,863	18,367,799
Victoria ..	69,932	19,718	4,735,131	2,767,377	5,370,284	12,872,792	12,962,442
Queensland ..	57,582	399	5,174,112	1,124,433	19,456,916	25,755,461	25,813,442
South Australia	12,110	23	2,335,373	436,801	2,112,572	4,884,746	4,896,879
Western Australia	14,131	5,670	1,427,463	621,994	2,107,782	4,157,239	4,177,040
Tasmania ..	3,919	3	541,972	123,622	1,501,371	2,166,965	2,170,887
Northern Territory	..	..	..	..	30,988	30,988	30,988
Total ..	212,362	29,061	23,004,674	6,899,902	38,273,478	68,178,054	68,419,477

(ii) *Liabilities, all States, June Quarters, 1920 to 1924.*—The average liabilities in the years specified are given in the table below. The increase in Savings Bank deposits in 1921 was occasioned by the absorption of the Queensland Government Savings Bank in 1920–21.

**COMMONWEALTH BANK OF AUSTRALIA.—LIABILITIES, JUNE QUARTERS,
1920 TO 1924.**

Quarter ended 30th June—	Bills in Circulation.	Balances Due to Other Banks.	Deposits.				Total Liabilities.
			Not Bearing Interest.	Bearing Interest.	Savings Bank Deposits.	Total Deposits.	
	£	£	£	£	£	£	£
1920 ..	170,161	174,678	19,625,131	11,932,081	17,008,259	48,565,471	48,910,310
1921 ..	184,115	143,045	15,966,670	10,608,164	34,440,421	61,015,255	61,342,415
1922 ..	167,590	104,466	19,236,693	10,812,159	36,137,065	66,185,793	66,457,973
1923 ..	204,576	29,849	17,718,999	14,658,671	38,102,850	70,480,520	70,714,945
1924 ..	212,362	29,061	23,004,674	6,899,902	38,273,478	68,178,054	68,419,477

(iii) *Assets, June Quarter, 1924.* The assets for the June Quarter, 1924, are as follows :—

COMMONWEALTH BANK OF AUSTRALIA—ASSETS, JUNE QUARTER, 1924.

States and Territory.	Coin.	Bullion.	Government and Municipal Securities.	Landed and House Property.	Notes and Bills of Other Banks.	Balances Due from Other Banks.	Discounts, Overdrafts, and all other Assets (not including Contingent Assets).	Australian Notes.	Total Assets.
	£	£	£	£	£	£	£	£	£
N.S.W. ..	590,035	..	13,681,503	315,910	218,866	2,088,358	5,385,654	4,105,571	26,385,897
Victoria ..	336,118	2,285	3,910,972	350,942	160,583	1,608,494	2,018,369	2,969,035	11,356,798
Queensland ..	454,825	12	17,882,738	141,400	295,503	218,293	2,943,910	800,991	22,737,672
S. Australia ..	109,697	..	1,365,593	89,237	120,363	613,826	436,893	447,310	3,182,919
W. Australia ..	590,444	4,386	747,931	19,924	96,095	230,238	858,265	530,407	3,077,690
Tasmania ..	19,755	..	1,949,114	..	30,877	67,232	356,266	231,020	2,653,773
Nor. Ter. ..	..	..	..	..	45,000	45,880	75	..	90,955
Total ..	2,100,874	6,683	39,537,851	917,413	966,787	4,872,321	11,999,432	9,084,343	69,485,704

(iv) *Assets, all States, June Quarters, 1920 to 1924.*—In the last five years assets have increased from £38,710,054 to £69,485,704, the increase having taken place mainly in Government and Municipal Securities.

COMMONWEALTH BANK OF AUSTRALIA—ASSETS, JUNE QUARTERS, 1920 TO 1924.

Quarter ended 30th June—	Coin.	Bullion.	Government and Municipal Securities.	Landed and House Property.	Notes and Bills of Other Banks.	Balances Due from Other Banks.	Discounts, Overdrafts, and all other Assets (not including Contingent Assets).	Australian Notes.	Total Assets.
	£	£	£	£	£	£	£	£	£
1920 ..	1,647,915	23,384	17,835,529	410,526	1,085,212	3,477,920	11,118,269	3,111,299	38,710,054
1921 ..	1,846,976	10,580	33,640,763	624,186	939,500	3,350,321	14,896,625	4,922,840	60,231,791
1922 ..	2,339,719	10,151	34,760,870	599,960	3,487,074	3,488,840	14,130,747	4,730,493	63,547,854
1923 ..	2,637,450	9,397	37,479,846	762,730	5,138,747	2,772,000	14,035,767	3,750,438	66,586,375
1924 ..	2,100,874	6,683	39,537,851	917,413	966,787	4,872,321	11,999,432	9,084,343	69,485,704

8. Clearing Houses.—The Sydney Banks' Exchange Settlement, and the Melbourne Clearing House, at which settlements are effected daily between the banks doing business in New South Wales and Victoria respectively, publish figures of the weekly clearances effected. From these it appears that in 1924 the total clearances in Sydney amounted to £846,000,000, and in Melbourne to £734,000,000. Owing to the different distribution of the banking business in the two cities, the figures do not necessarily afford a fair comparison of the volume of banking business transacted in Sydney and Melbourne. Returns of all Australian Clearing Houses for the last five years are shown in the following table :—

CHEQUE-PAYING BANKS.—CLEARING HOUSE RETURNS, 1920 TO 1924.

Year.	Sydney.	Melbourne.	Brisbane.	Adelaide.	Perth.
	£	£	£	£	£
1920 ..	764,546,000	725,006,000	160,539,000	166,011,000	80,758,000
1921 ..	709,734,000	609,335,000	157,549,000	157,503,000	67,619,000
1922 ..	726,583,000	623,789,000	172,836,000	147,374,000	75,279,000
1923 ..	805,032,000	697,050,000	194,915,000	160,524,000	83,730,000
1924 ..	845,855,000	734,080,000	179,335,000	212,220,000	97,920,000

§ 3. Savings Banks.

1. **General.**—In the following tables dealing with Savings Banks the figures for all the States except Tasmania refer to financial years ended 30th June. In the case of Tasmania, figures for the two trustee savings banks were made up to the last day of February in each year up to 1918–19, but in 1919–20 and subsequent years were made up to August. The figures in each State are inclusive of the Savings Bank Department of the Commonwealth Bank made up to the 30th June.

2. **Accounts Open.**—The number of accounts open, not of those making deposits, and the number per 1,000 of the population, at 30th June in each of the last five years are shown in the following table:—

SAVINGS BANKS.—ACCOUNTS OPEN, 1920 TO 1924.

30th June.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	N. Ter.	All States.
NUMBER.								
1920 ..	1,053,893	1,014,223	364,149	377,435	204,005	108,289	987	3,122,981
1921 ..	1,126,157	1,072,554	327,065	396,970	217,136	115,502	935	3,256,319
1922 ..	1,186,948	1,127,892	337,621	414,570	225,136	120,252	861	3,413,280
1923 ..	1,246,191	1,188,437	355,902	432,438	250,214	124,850	869	3,598,901
1924 ..	1,306,948	1,268,629	375,025	452,342	264,842	130,032	844	3,798,662

PER 1,000 OF POPULATION.

1920 ..	509	671	486	776	618	517	243	583
1921 ..	535	698	426	798	651	545	238	597
1922 ..	552	718	431	821	662	564	235	613
1923 ..	568	739	442	836	719	583	238	633
1924 ..	586	774	453	855	735	610	233	655

The fall in the number of accounts open in Queensland in 1920–21 is due to the absorption of the State Savings Bank by the Commonwealth Bank.

In connexion with the number of accounts open per 1,000 of the population, it must be borne in mind that savings bank accounts are not restricted to adults, since many accounts are opened in the names of children. The proportion, notwithstanding, is a very large one, amounting in the case of Australia to nearly two-thirds, and rising in Victoria to over three-quarters and in South Australia to six-sevenths of the population. As it is possible in some States for the same person to have accounts in both Commonwealth and State Savings Banks, the figures given are somewhat in excess of the number of individual depositors. Allowance must also be made for the fact that the funds of various societies, small trust funds, etc., are sometimes deposited in Savings Banks.

3. **Deposits.**—The deposits in Australia reached in 1924 the large sum of £176,871,477, and would no doubt be even larger if the banks did not restrict interest-bearing deposits to certain limits. While not granting facilities to draw cheques, the Australian savings banks practically afford the small tradesman all the advantages of a current account, and in addition allow interest on the minimum monthly balance instead of charging a small fee for keeping the account, as is the practice of the ordinary banks. All the Savings Banks have a reciprocity arrangement, under which money deposited in one State may be drawn out in another State, even by telegraph.

The table below shows the amount at credit of depositors, the average per account open, and the average amount deposited for head of population at the end of each of the last five years :—

SAVINGS BANKS.—DEPOSITS, 1920 TO 1924.

30th June.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	N. Ter.	All States.
TOTAL.								
	£	£	£	£	£	£	£	£
1920 ..	49,933,535	42,317,863	17,909,571	15,496,514	7,258,384	3,930,181	57,106	136,903,154
1921 ..	57,394,441	48,970,989	18,587,942	16,317,353	7,663,440	4,159,502	53,790	153,147,457
1922 ..	61,791,273	52,131,032	19,394,156	16,931,678	7,759,317	4,224,662	41,115	162,273,233
1923 ..	64,324,670	56,101,260	20,483,581	18,249,540	8,033,419	4,414,653	36,689	171,643,812
1924 ..	66,162,055	58,028,190	20,410,364	19,351,127	8,218,147	4,670,804	30,790	176,871,477

AVERAGE PER SAVINGS BANK ACCOUNT.

	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1920 ..	47 7 7	41 14 6	49 3 8	41 1 2	35 11 7	36 5 10	57 17 2	43 16 9
1921 ..	50 19 4	45 13 2	56 16 8	41 2 1	35 5 10	36 0 3	57 10 7	47 0 7
1922 ..	52 1 2	46 4 5	57 8 10	40 16 10	34 9 4	35 2 7	47 15 1	47 10 10
1923 ..	51 12 4	47 4 1	57 11 1	42 4 0	32 2 1	35 7 2	41 5 5	47 13 10
1924 ..	50 12 6	45 14 10	54 8 6	42 15 7	31 0 7	35 18 5	36 9 7	46 11 3

PER HEAD OF POPULATION.

	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1920 ..	24 2 6	27 19 10	23 18 5	31 17 1	21 19 8	18 12 10	14 0 8	25 10 10
1921 ..	27 5 5	31 17 10	24 4 6	32 16 2	22 19 5	19 12 8	13 14 1	28 1 7
1922 ..	28 14 7	33 3 11	24 15 0	33 10 9	22 16 4	19 16 1	11 4 8	29 3 0
1923 ..	29 6 9	34 17 11	25 8 6	35 6 5	23 1 6	20 13 0	10 1 2	30 3 6
1924 ..	29 13 4	35 7 9	24 13 3	36 11 10	22 16 1	21 18 2	8 9 10	30 9 6

A comparison of the number of accounts open and the amount of deposits shows that the average amounts to the credit of each account are considerably larger in some States than in others; in other words, in one State a comparatively larger proportion of the population makes use of the savings banks than in another, with the result that there is a smaller amount to the credit of the individual account. Within the same State there is little variation in the figures from year to year, except that each State generally shows a steady advance.

The average amount deposited per head of population increased during the period by almost 20 per cent., the figures for Victoria being particularly noticeable.

4. Rates of Interest.—The rates of interest allowed, and the limits of interest-bearing deposits, are as follows :—New South Wales, Government Savings Bank, 4 per cent. up to £500 and 3½ per cent. on the excess up to £1,000; Victoria, 4 per cent. on first £500 and then 3 per cent. for a further £500, also 4 per cent. on deposit stock up to £1,000; South Australia, 3½ per cent. on accounts closed during the year, and 4½ per cent. up to £500 on accounts remaining open; Western Australia, 3½ per cent. from £1 to £500, and 3 per cent. from £500 to £1,000; also 4 per cent. on deposit stock up to £1,000; Hobart Trustees' Savings Bank, 4½ per cent. up to £300; Launceston Trustees' Savings Bank, 4½ per cent. up to £150, and Commonwealth Savings Bank, 3½ per cent. on the first £1,000, and 3 per cent. upon another £300.

5. Annual Business.—The business transacted by the savings banks is very large when compared with the total amount of deposits. This is of course due to the fact that many accounts are used as convenient current accounts. Thus, during the last year of the period under review, the total amount deposited and withdrawn (exclusive of interest added) amounted to more than double the total amount of deposits at the end of the previous year, while the amount at credit of depositors (inclusive of interest added)

increased 3 per cent. during the same year. The following table shows the business transacted during the year 1923-24 :—

SAVINGS BANKS.—TRANSACTIONS, 1923-24.

State.	Total Deposits at end of Year 1922-23.	Amounts Deposited during Year 1923-24.	Interest Added during Year 1923-24.	Total.	Amounts Withdrawn during Year 1923-24.	Total Deposits at end of Year 1923-24.
	£	£	£	£	£	£
N.S. Wales ..	64,324,670	66,597,386	2,310,624	133,232,680	67,070,625	66,162,055
Victoria ..	56,101,260	58,053,949	2,037,129	116,192,338	58,164,148	58,028,190
Queensland ..	20,483,581	21,816,023	660,233	42,959,837	22,549,473	20,410,364
South Australia ..	18,249,540	16,401,276	747,116	35,397,932	16,046,805	19,351,127
West. Australia ..	8,033,419	8,429,570	256,983	16,719,972	8,501,825	8,218,147
Tasmania ..	4,414,653	4,303,107	171,847	8,889,607	4,218,803	4,670,804
Nor. Territory ..	36,689	18,724	1,155	56,568	25,778	30,790
Total ..	171,643,812	175,620,035	6,185,087	353,448,934	176,577,457	176,871,477

6. Commonwealth Savings Bank.—The figures in the preceding tables include those relating to the Savings Bank Department of the Commonwealth Bank, which commenced operations in Victoria on the 15th July, 1912, in Queensland on the 16th September, 1912, in the Northern Territory on the 21st October, 1912, and in the States of New South Wales, South Australia, and Western Australia on the 13th January, 1913. Extensive use is made of the country post-offices as local agencies.

The Commonwealth Bank absorbed the Tasmanian State Savings Bank in January, 1913, on terms set out in Official Year Book No. 6. The transfer of the Queensland Savings Bank was effected in 1920.

The following table gives the number of depositors, and the amount at credit on 30th June, 1924, at the various branches of the Commonwealth Savings Bank :—

COMMONWEALTH SAVINGS BANK, 30th JUNE, 1924.

Locality.	Number of Depositors.	Amount at Credit.
		£
New South Wales	261,863	8,169,751
Victoria	148,074	5,669,977
Queensland	375,025	20,410,364
South Australia	53,150	2,276,657
Western Australia	67,961	2,298,027
Tasmania	60,940	1,598,783
Northern Territory	844	30,790
Papua and New Guinea	1,664	74,783
London	7,719	541,967
Total	977,240	41,071,099

A series of graphs illustrating the progress of banking accompanies this chapter.

§ 4. Companies.

1. General.—Returns in regard to registered companies are defective, and, with few exceptions, are not available for Tasmania. They embrace (a) Returns relating to Trustees, Executors and Agency Companies; (b) Returns relating to Registered Building and Investment Societies; and (c) Returns relating to Registered Co-operative Societies.

2. Trustees, Executors and Agency Companies.—Returns are available for eight Victorian, two New South Wales, one Queensland, four South Australian, two Western Australian, and three Tasmanian companies. The paid-up capital of these twenty companies amounted to £934,234; reserve funds and undivided profits to £669,067; other liabilities, £288,198; total liabilities, £1,891,499. Among the assets are included:—Deposits with Governments, £197,504; other investments in public securities, fixed deposits, etc., £486,917; loans on mortgage, £164,103; property owned, £714,243;

other assets, £328,732. Of the nineteen companies, nine show the total amount of the estates, etc., under administration, the total for 1924 being over £75,000,000. Net profits for the year totalled £165,383, of which £100,274 was paid in dividends.

3. Registered Building and Investment Societies.—(i) *General.* Returns have been received relating to 85 societies, viz., 7 in New South Wales, 27 in Victoria, 13 in Queensland, 19 in South Australia, 15 in Western Australia, and 4 in Tasmania. The information is not exhaustive, as particulars regarding unimportant organizations are not included.

REGISTERED BUILDING AND INVESTMENT SOCIETIES.—SUMMARY, 1923-24.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania	All States.
Number of societies ..	7	27	13	19	15	4	85
Number of shareholders ..	(a)	8,919	6,452	12,744	7,235	3,566	38,916b
Number of shares ..	(a)	(a)	1,109,573	43,518	21,888	26,832	1,201,811c
Number of borrowers ..	(a)	9,673	3,457	2,653	1,434	1,326	18,543b
Income for year from interest ..	£ 102,977	£ 262,421	£ 43,489	£ 23,437	(d)	£ 32,901	£ 465,225
Working expenses for year ..	£ 94,752	£ 106,740	£ 10,048	£ 11,805	£ 18,690	£ 12,531	£ 254,566
Amount of deposits during year ..	(a)	£ 1,268,266	£ 124,322	£ 16,586	£ 140,724	£ 54,394	£ 1,604,292b
Repayment of loans during year ..	(a)	£ 962,390	£ 140,378	£ 112,360	£ 84,894	£ 94,436	£ 1,394,458b
Loans granted during year ..	(a)	£ 1,094,994	£ 182,612	£ 156,949	£ 129,870	£ 100,053	£ 1,664,478b

(a) Not available.

(b) Exclusive of New South Wales.

(c) Exclusive of New South Wales and Victoria.

(d) Included in repayment of Loans.

(ii) *Liabilities.* The balance-sheets cover various periods ended during the second half of 1923 and the first half of 1924, so that the returns may be assumed to correspond roughly to the financial year 1923-24.

REGISTERED BUILDING AND INVESTMENT SOCIETIES.—LIABILITIES, 1923-24.

State.	Paid-up Capital or Subscriptions.	Reserve Funds.	Deposits.	Bank Overdrafts and other Liabilities.	Total Liabilities.
	£	£	£	£	£
New South Wales ..	364,440	263,325	522,329	51,403	1,201,497
Victoria ..	1,530,426	549,427	1,170,352	244,592	3,494,797
Queensland ..	595,906	27,376	6,476	42,188	671,946
South Australia ..	410,477	54,690	14,942	24,338	504,447
Western Australia ..	250,440	..	61,786	17,933	330,159
Tasmania ..	155,986	75,290	218,583	10,682	460,541
Total ..	3,307,675	970,108	1,994,468	391,136	6,663,387

(iii) *Assets.* The assets of the companies for the same period were as follows:—

REGISTERED BUILDING AND INVESTMENT SOCIETIES.—ASSETS, 1923-24.

State.	Advances on Mortgage.	Landed and House Property, Furniture, etc.	Cash in Hand and on Deposit and other Assets.	Total Assets.
	£	£	£	£
New South Wales ..	1,040,854	(a)	160,643	1,201,497
Victoria ..	3,277,145	93,491	124,161	3,494,797
Queensland ..	631,323	7,098	31,437	669,858
South Australia ..	464,279	17,930	22,238	504,447
Western Australia ..	314,155	229	15,775	330,159
Tasmania ..	409,423	10,390	40,728	460,541
Total ..	6,137,179	129,138	394,982	6,661,299

(a) Included with other assets.

4. Co-operative Societies.—(i) *General.* The returns relating to Co-operative Societies have been divided into two classes—(i) those engaged in the manufacture and marketing of primary products and trade requirements, and (ii) those engaged in retailing general household requirements. The former may be described briefly as Producers' Co-operative and the latter as Consumers' Co-operative Societies. The following table shows the number of societies, the membership, and the capital employed for the year 1924 :—

CO-OPERATIVE SOCIETIES.—NUMBER, MEMBERSHIP AND CAPITAL, 1924.

Heading.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	All States.
Producers' Co-operative Societies—							
Number of Societies ..	52	55	26	20	17	10	180
Membership ..	39,050	50,860	21,844	19,027	1,748	4,760	137,289
Loan Capital £	417,118	969,184	194,223	107,693	20,013	109,564	1,817,795
Share Capital £	726,535	1,172,249	330,902	606,319	24,281	61,988	2,922,274
Total Capital £	1,143,653	2,141,433	525,125	714,012	44,294	171,552	4,740,069
Consumers' Co-operative Societies—							
Number of Societies ..	29	27	7	11	40	4	118
Membership ..	34,380	9,654	3,161	32,317	5,858	746	86,116
Loan Capital £	33,290	167,266	25,030	176,066	33,577	13,733	448,971
Share Capital £	476,619	147,688	40,044	585,854	72,010	17,332	1,339,547
Total Capital £	509,918	314,954	65,074	761,920	105,587	31,065	1,788,518
All Societies—							
Number of Societies ..	81	82	33	31	57	14	298
Membership ..	73,430	60,514	25,005	51,344	7,606	5,506	223,405
Loan Capital £	450,417	1,136,450	219,253	283,759	53,590	123,297	2,266,766
Share Capital £	1,203,154	1,319,937	370,946	1,192,173	96,291	79,320	4,261,821
Total Capital £	1,653,571	2,456,387	590,199	1,475,932	149,881	202,617	6,528,587

(ii) *Sales, Profits, Interest, and Dividends paid.* The next table gives the total sales, net profits, interest paid on loan capital, and dividends on share capital.

The profits made by Consumers' Co-operative Societies, after payment of interest on loan and share capital, are distributed as dividends on the amount of purchases made by members.

CO-OPERATIVE SOCIETIES.—SALES, PROFITS, INTEREST, AND DIVIDENDS, 1924.

Heading.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	All States.
Producers' Co-operative Societies—							
Total Sales ..	£ 14,966,287	11,277,168	2,663,539	3,941,454	280,558	156,434	33,285,440
Total Net Profits ..	£ 142,352	79,497	30,718	27,454	16,584	(-) 589	290,016
Interest on Loan Capital—							
Amount ..	£ 18,512	54,379	8,320	3,258	1,205	4,305	89,979
Rate per Cent. ..	7.0	6.5	6.5	6.5	7.7	5.8	6.7
Dividend on Share Capital—							
Amount ..	£ 44,194	22,816	5,156	1,499	1,865	141	75,671
Rate per Cent. ..	6.1	1.9	1.6	0.2	7.5	0.2	2.9
Consumers' Co-operative Societies—							
Total Sales ..	£ 2,197,196	927,442	241,658	1,847,960	425,034	117,855	5,757,145
Total Net Profits ..	£ 184,269	31,342	6,907	86,166	21,335	3,873	333,892
Interest on Loan Capital—							
Amount ..	£ 1,122	7,472	1,412	11,175	2,096	1,166	24,443
Rate per Cent. ..	6.3	6.7	6.0	5.7	6.5	6.9	6.4
Interest on Share Capital—							
Amount ..	£ 10,642	7,827	1,247	25,585	2,579	573	43,453
Rate per Cent. ..	2.2	5.3	3.1	4.4	3.6	3.3	3.6
Dividends on Purchases ..	£ 170,664	12,796	4,638	40,375	5,883	2,032	242,388
Rate in the £1 ..	1s. 7d.	0s. 3d.	0s. 5d.	0s. 6d.	0s. 3d.	0s. 4d.	0s. 10d.

(-) Indicates a loss.

§ 5. Life Assurance.

[Note.—A Conspectus of Australian Life Assurance Legislation will be found in Chap. XXVII. "Miscellaneous."]

1. **General.**—Under section 51 of the Commonwealth Constitution Act, the Commonwealth Parliament is empowered to legislate in regard to "insurance, other than State insurance; also State insurance extending beyond the limits of the State concerned." With the exception of Act No. 12 of 1905, "An Act relating to assurance on the lives of children by life assurance companies or societies," no legislation relating to life assurance has been passed by the Commonwealth Parliament, and life assurance companies carry on their business under State laws where such laws are in existence, or otherwise under the provisions of various companies' or special Acts.

Returns for the year 1923 have been collected from life assurance societies, with results which are in the main satisfactory. The figures below refer to Australian business only.

2. **Companies Transacting Business.**—(i) *General.* The number of companies transacting life assurance business in Australia during 1923 was 35, of which the full name and location of head office are set out in the table below.

LIFE ASSURANCE SOCIETIES OPERATING IN AUSTRALIA, 1923.

Full Name of Company or Society.	Head Office.	Business Transacted.
Australian Mutual Provident Society	Sydney	Ord. Ind.
Mutual Life and Citizens' Assurance Company Limited	"	"
City Mutual Life Assurance Society Limited	"	Ord.
Australian Metropolitan Life Assurance Company Limited	"	Ord. Ind.
People's Prudential Assurance Company Limited	"	"
Assurance and Thrift Association Limited	"	Ord.
Co-operative Assurance Company Limited	"	"
Australian Provincial Assurance Association Limited	"	"
Commonwealth General Assurance Corporation Limited	"	Ord. Ind.
Commonwealth Life Assurance Society Limited	"	"
Australian Benefit Life Assurance Society Limited	"	Ord.
Farmers' and General Assurance Corporation Limited	"	"
Producers' and Citizens' Co-operative Assurance Company of Australia Limited	"	Ord. Ind.
Australian Natives' Association Limited	"	"
Australasian Catholic Assurance Company Limited	"	"
Australian Federal Life and General Assurance Company Limited	"	Ord.
Empire Life and General Assurance Company Limited	"	"
Citizens' and Graziers' Life Assurance Company Limited	"	Ord. Ind.
Australian Group and General Assurance Company Limited	"	"
Australian Alliance Assurance Company Limited	Melbourne	Ord.
National Mutual Life Association of Australasia Limited	"	"
Victoria Life and General Insurance Company	"	"
Colonial Mutual Life Assurance Society Limited	"	Ord. Ind.
Australasian Temperance and General Mutual Life Assurance Society Limited	"	"
Life Insurance Company	"	"
Southern Cross Assurance Company Limited	"	Ord.
New Era Insurance Company of Australasia Limited	"	"
Queensland State Insurance Office	Brisbane	"
Equitable Life Assurance Company of Queensland Limited	"	"
Queensland Probate Insurance Company Limited	"	"
Western Australian Insurance Company Limited	Perth	"
Provident Life Assurance Company	Dunedin	Ord. Ind.
Liverpool and London and Globe Insurance Company	Liverpool	Ord.
Mutual Life Insurance Society of New York	New York	"
New York Life Insurance Society	"	"

Early in 1923 the Equitable Life Assurance Society re-insured its entire Australasian business with the National Mutual Life Association, which accepted the transfer of the whole of the assets of the Equitable consisting of property, bonds, and deposits.

Of the Australian companies seven are purely mutual, and twenty-three are proprietary companies with a paid-up capital aggregating £1,307,877, part of which is, however, used in fire, marine, and accident insurance business. One office is a State government institution. Four foreign companies transacted business in Australia in 1923, two being mutual and two proprietary companies.

(ii) *Ordinary and Industrial Business.*—Of the societies enumerated in the preceding paragraph, fifteen transacted both ordinary and industrial business. Ordinary and industrial business have, where possible, been kept separate, while figures relating to companies whose head offices are in New Zealand or in Europe or America have been restricted to the Australian business.

3. *Australian Business, 1923.*—(i) *Ordinary.* The subjoined table shows the ordinary life business in force for each of the last five years. While the total sum assured has increased by over 56 million pounds, the average per policy has increased from £239 to £264. The amount assured in 1923 represents an average of £37 per head of population.

ORDINARY LIFE ASSURANCE.—AUSTRALIAN BUSINESS, 1919 TO 1923.

Year.	Policies.	Amount.	Average per Policy.	Annual Premium Income.
	No.	£	£	£
1919	643,975	153,682,007	239	5,209,139
1920	692,160	168,255,272	243	5,871,894
1921	730,010	180,694,068	248	6,074,375
1922	769,893	196,844,810	256	6,526,907
1923	795,887	210,049,945	264	6,925,581

(ii) *Industrial.* Information in regard to the industrial business of the nine societies transacting it is given in the following table.

The amount assured has increased by nearly 76 per cent. in the period under review. The average amount per policy in 1923 was £35, comparing with an average of £27 in 1919.

INDUSTRIAL LIFE ASSURANCE.—AUSTRALIAN BUSINESS, 1919 TO 1923.

Year.	Policies.	Amount.	Average per Policy.	Annual Premium Income.
	No.	£	£	£
1919	841,001	22,755,456	27	1,390,899
1920	904,346	26,223,335	29	1,586,313
1921	973,019	30,314,759	31	1,789,846
1922	1,061,569	35,303,233	33	2,087,148
1923	1,144,004	40,009,115	35	2,387,187

4. *Receipts and Expenditure.*—(i) *Ordinary Business.* The following table shows the aggregate Australian revenue for 1922 and 1923 of all the societies doing business in Australia. In the latter year premiums—new and renewal—amounted to 61 per cent., and interest, dividends, and rent to nearly 36 per cent. of the Australian revenue :—

ORDINARY LIFE ASSURANCE.—AUSTRALIAN RECEIPTS, 1922 AND 1923.

Heading.	Amount.	
	1922.	1923.
	£	£
Premiums—New	925,146	976,682
Renewal	5,601,761	5,948,899
Consideration for annuities	76,993	48,191
Interest, dividends and rents	3,762,410	4,078,407
Other receipts	152,247	218,961
Total Income	10,518,557	11,271,140

In 1923 expenditure amounted to £7,158,026, of which claims accounted for nearly 55 per cent., surrenders over 11 per cent., expenses of management nearly 12 per cent., and commission 8 per cent.

ORDINARY LIFE ASSURANCE.—AUSTRALIAN EXPENDITURE, 1922 AND 1923.

Heading.	Amount.	
	1922.	1923.
	£	£
Claims	3,796,599	3,926,371
Surrenders	689,869	838,066
Annuities	93,273	95,550
Commission	544,686	611,914
Expenses of management	788,391	817,508
Licence fees and taxes	101,310	113,302
Shareholders' dividends	49,279	58,037
Cash bonuses paid to shareholders	311,394	309,429
All other expenses	325,667	387,849
Total expenditure	6,700,468	7,158,026

A summary for the last five years is given hereunder :—

ORDINARY LIFE ASSURANCE.—AUSTRALIAN RECEIPTS AND EXPENDITURE, 1919 TO 1923.

Year.	Receipts.	Expenditure.	Excess Receipts.
	£	£	£
1919	8,172,614	5,698,551	2,474,063
1920	9,037,314	5,330,050	3,707,264
1921	9,599,866	5,813,414	3,786,452
1922	10,518,557	6,700,468	3,818,089
1923	11,271,140	7,158,026	4,113,114

(ii) *Industrial Business.* The aggregate Australian revenue for 1922 and 1923 of societies transacting industrial business was as follows :—

INDUSTRIAL LIFE ASSURANCE.—AUSTRALIAN RECEIPTS, 1922 AND 1923.

Heading.	Amount.	
	1922.	1923.
	£	£
Premiums—New and renewal	2,087,148	2,387,187
Consideration for annuities	23	268
Interest, dividends and rents	399,477	512,644
Other receipts	18,143	20,584
Total Income	2,504,791	2,920,683

Expenditure during 1923 totalled £1,637,646. Claims amounted to £514,156, or 31 per cent., commission 36 per cent., and expenses of management nearly 20 per cent.

INDUSTRIAL LIFE ASSURANCE.—AUSTRALIAN EXPENDITURE, 1922 AND 1923.

Heading.	Amount.	
	1922.	1923.
	£	£
Claims	425,359	514,156
Surrenders	34,103	50,846
Annuities	295	295
Commission	505,716	689,029
Expenses of management	240,867	321,692
Licence fees and taxes	15,693	17,297
Shareholders' dividends	57,421	56,809
Cash bonuses paid to shareholders .. .. .	..	13
All other expenses	76,358	87,509
Total Expenditure	1,355,812	1,637,646

The aggregate receipts and expenditure for the last five years are as follows :—

INDUSTRIAL LIFE ASSURANCE.—AUSTRALIAN RECEIPTS AND EXPENDITURE, 1919 TO 1923.

Year.	Receipts.	Expenditure.	Excess Receipts.
	£	£	£
1919	1,674,700	992,974	681,726
1920	1,929,717	1,060,622	869,095
1921	2,223,319	1,122,920	1,100,399
1922	2,504,791	1,355,812	1,148,979
1923	2,920,683	1,637,646	1,283,037

5. *Liabilities and Assets, 1923.*—(i) *General.* The liabilities of the Australian societies consist mainly of their assurance funds; as already mentioned, however, some of the societies are proprietary, and in these cases there is a further liability on account of the shareholders' capital. The assets consist chiefly of loans on mortgage and policies, Government, municipal, and similar securities, shares, freehold property, etc. As in some cases the Australian liabilities exceed the Australian assets, this table should be read in connexion with the table dealing with assets. Loans on personal security are granted by very few of the Australian societies.

(ii) *Ordinary and Industrial Business.* For various reasons several societies do not attempt the division of liabilities and assets between the industrial and ordinary branches, and a few societies cannot state the amount of liabilities in Australia. In the following table, therefore, the figures relate to both branches. Australian liabilities amounted in 1923 to £64,100,864, including assurance and annuity funds, £56,480,692, other funds, including those used in fire and marine business, £4,380,967, and paid-up capital, £1,307,877.

Australian assets aggregated £88,099,016, of which the following are the principal items :—Government and municipal securities, £49,261,981; mortgages, £19,546,248; loans on companies' policies, £8,138,547; and landed and house property, £3,576,368. Details regarding liabilities for the years 1922 and 1923 are given in the next table :—

**ORDINARY AND INDUSTRIAL LIFE ASSURANCE.—AUSTRALIAN LIABILITIES,
1922 AND 1923.**

Heading.	Amount.	
	1922.	1923.
	£	£
Shareholders' capital, paid up	1,122,109	1,307,877
Assurance and annuity funds	52,098,875	56,480,692
Other funds	3,923,512	4,380,967
Claims admitted but not paid	695,348	632,116
All other liabilities	1,637,333	1,299,212
Total Australian liabilities (a)	59,477,177	64,100,864

(a) Excluding Mutual Life and Citizens, Australian Provincial, National Mutual, Western Australian, London and Liverpool and Globe, and Mutual Life of United States.

Assets for the years specified are set out in detail in the table hereunder:—

**ORDINARY AND INDUSTRIAL LIFE ASSURANCE.—AUSTRALIAN ASSETS, 1922
AND 1923.**

Heading.	Amount.	
	1922.	1923.
	£	£
Government and municipal securities	46,488,751	49,261,981
Mortgages	17,603,444	19,546,248
Loans on companies' policies	7,492,847	8,138,547
Railway debentures and stock	423,102	504,548
Landed and house property	3,168,158	3,576,368
Life interests and reversions	124,885	131,565
Other investments	1,465,865	1,209,171
Outstanding premiums	619,349	714,157
Outstanding interest, dividends and rents	730,409	783,755
Cash	1,223,727	1,256,994
Establishment and organization accounts	442,276	693,484
All other assets	1,191,122	2,282,198
Total Australian Assets	80,973,935	88,099,016

The next table gives the Australian liabilities and assets for the latest five years available:—

**ORDINARY AND INDUSTRIAL LIFE ASSURANCE.—AUSTRALIAN LIABILITIES
AND ASSETS, 1919 TO 1923.**

Year.	Liabilities.(a)	Assets.
	£	£
1919	44,683,471	64,513,919
1920	49,489,851	71,768,149
1921	54,258,431	77,127,498
1922	59,477,177	80,973,935
1923	64,100,864	88,099,016

(a) Excluding Mutual Life and Citizens, People's Prudential, Australian Provincial, National Mutual, Western Australian, London and Liverpool and Globe, and Mutual Life of United States.

(iii) *Total Assets.* It has been thought advisable to restrict the figures relating to life assurance to business in Australia. Several of the companies whose head offices are in Australia transact, however, a large amount of business elsewhere, viz., in New

Zealand, in South Africa, and in the United Kingdom, while in the case of the foreign companies, the Australian business is insignificant compared with that done elsewhere. Particulars as to this foreign business of both Australian and foreign companies will be found in "Finance Bulletin No. 15" (published by this Bureau), and a short table only is inserted here, showing the total assets of the various companies.

LIFE ASSURANCE COMPANIES.—TOTAL ASSETS, 1922 AND 1923.

Heading.	Amount.	
	1922.	1923.
	£	£
Government and municipal securities ..	176,458,610	144,837,468
Mortgages ..	122,341,469	101,969,269
Loans on companies' policies ..	84,250,676	65,091,066
Railway debentures and debenture stock ..	175,796,865	136,685,044
Landed and house property ..	12,349,551	10,190,544
Life interests and reversions ..	307,697	339,294
Other investments ..	7,149,051	2,057,446
Outstanding premiums ..	7,200,994	6,621,985
Outstanding interest, dividends, and rent ..	7,789,990	6,323,469
Cash ..	7,240,532	5,114,661
Establishment and organization accounts ..	452,626	703,834
All other assets ..	4,704,812	4,241,335
Total Assets ..	606,042,873	484,175,415

6. **New Policies issued in Australia, 1923.**—(i) *Ordinary Business.* During 1923, 94,546 new policies were issued for £30,127,386. The average amount per policy was £318, which compares with an average of £306 per policy for all policies which were in existence in 1923.

(ii) *Industrial Business.* New policies to the number of 240,356 were issued during the year for a total of £11,744,508. The average per policy was £48, which is 37 per cent. more than the average for all industrial policies which were current in 1923.

7. **Policies Discontinued in Australia, 1922 and 1923.**—(i) *Ordinary Business.* The volume of business which from various causes becomes void in each year is always large. The number and amount of policies discontinued in 1922 and 1923, and the reasons for discontinuance, are given in the following table :—

ORDINARY LIFE ASSURANCE.—POLICIES DISCONTINUED IN AUSTRALIA, 1922 AND 1923.

Mode.	1922.		1923.	
	No. of Policies.	Amount.	No. of Policies.	Amount.
		£		£
Death or maturity ..	13,018	3,023,386	13,216	2,928,407
Surrender ..	10,853	2,590,826	18,612	3,720,874
Forfeiture ..	31,028	8,418,628	35,637	9,951,997
Total ..	54,899	14,032,840	67,465	16,601,278

(ii) *Industrial Business.* The number of policies discontinued in this branch each year is also very large. Of the total amount of discontinuance during 1923 only 8 per cent. was due to death or maturity, while 87 per cent. was due to forfeiture.

INDUSTRIAL LIFE ASSURANCE.—POLICIES DISCONTINUED IN AUSTRALIA, 1922 AND 1923.

Mode.	1922.		1923.	
	No. of Policies.	Amount.	No. of Policies.	Amount.
		£		£
Death or maturity	21,974	474,215	25,902	562,568
Surrender	6,516	341,340	7,048	374,517
Forfeiture	103,554	4,882,044	128,837	6,258,021
Total	132,044	5,697,599	161,787	7,195,106

Graphs illustrating the progress of Life Assurance, both Ordinary and Industrial, accompany this chapter.

§ 6. Fire, Marine and General Insurance.

1. *Australasian Business.*—(i) *General.* Returns are available showing the revenue and expenditure, assets and liabilities, and investments of 36 insurance companies having their head offices either in Australia, New Zealand, or Fiji. The names of these companies, with the location of their respective head offices, are given in the following table:—

AUSTRALASIAN FIRE, MARINE, AND GENERAL INSURANCE COMPANIES.

Company.	Head Office.
Assurance and Thrift	Sydney
Australian Alliance	Melbourne
Australian Mutual Fire	Sydney
Australian Provincial	"
Australian Traders'	"
Automobile	Melbourne
Bankers and Traders'	Sydney
Chamber of Manufacturers	Melbourne
City Mutual Fire	Sydney
Colonial Mutual Fire	Melbourne
Commonwealth General	Sydney
Co-operative	Melbourne
Derwent and Tamar	Hobart
Farmers' Co-operative, New Zealand	Christchurch
Farmers and Settlers'	Sydney
Federal Mutual	"
Insurance Office of Australia	"
Mercantile Mutual	"
Manufacturers' Mutual	"
Mutual Fire Insurance Co. of Tasmania	Launceston
National of New Zealand	Dunedin
New Zealand Insurance Co.	Auckland
New Zealand State Fire Insurance Office	Wellington
New Zealand Government Accident	"
Pacific Insurance Co.	Fiji
Queensland Insurance Co.	Sydney
Queensland State Government	Brisbane
South British	Auckland
Southern Union	Melbourne
Standard of New Zealand	Dunedin
Tasmanian Government	Hobart
United	Sydney
Victoria	Melbourne
Victoria General	"
Victoria State Accident	"
Western Australian Insurance Co.	Perth

(ii) *Revenue and Expenditure.* The accounts given hereunder relate approximately to calendar years. The most important items of revenue and expenditure are given below. While the receipts from premiums have increased during the period under review, the

amounts debited to expenses, commission, and taxation and to losses have increased at a much greater rate, with the result that the trade surplus has decreased very considerably, amounting in 1922-23 to only £97,452, representing 1.70 per cent. of premium income, and in 1923-24 to £231,387, equal to 4 per cent. of premium income.

FIRE, MARINE, AND GENERAL INSURANCE COMPANIES.—SUMMARY OF REVENUE AND EXPENDITURE, 1919 TO 1924.

Heading.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
	£	£	£	£	£
Premiums, less re-insurances ..	4,975,879	5,132,329	6,143,416	5,740,063	5,791,549
Losses ..	2,614,430	2,637,234	3,361,584	3,378,013	3,298,437
Expenses, commission, and taxes ..	1,588,322	1,698,406	2,194,452	2,264,598	2,261,725
Trade surplus ..	773,127	796,689	587,380	97,452	231,387
Interest, rent, etc. ..	380,622	374,751	499,382	515,487	549,792
Total surplus ..	1,153,749	1,171,440	1,086,762	612,939	781,179
Dividends and bonuses paid ..	398,699	378,943	450,477	461,940	494,603
Ratio to premium income of—					
(a) Losses .. per cent.	52.54	51.39	54.72	58.85	56.95
(b) Expenses, &c. .. per cent.	31.92	33.09	35.72	39.45	39.05
(c) Trade surplus .. per cent.	15.54	15.52	9.56	1.70	4.00

(iii) *Liabilities and Assets.* The liabilities and assets for the same period are set out in the following tables. Comparison of the results for 1923-24 with those for 1919-20 shows that paid-up capital increased by 54 per cent. and reserves by 28 per cent. While loans on mortgage decreased 21 per cent., Government securities nearly doubled, and landed and other property showed a growth of over 50 per cent.

FIRE, MARINE, AND GENERAL INSURANCE COMPANIES, 1919 TO 1924.

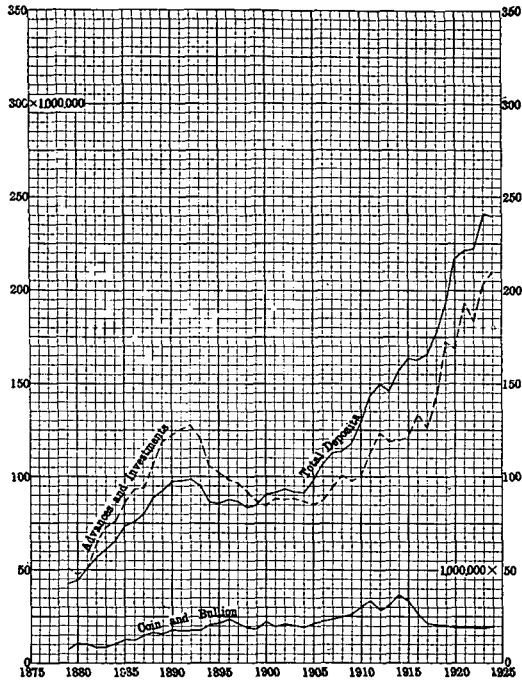
Heading.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
PAID-UP CAPITAL, RESERVES, AND LIABILITIES.					
	£	£	£	£	£
Paid-up capital ..	3,365,235	3,879,641	4,652,348	5,100,651	5,201,715
Reserves and re-insurance funds (a) ..	4,635,401	5,282,399	5,574,784	5,530,537	5,925,283
Undivided profits ..	394,795	503,657	493,388	455,992	510,009
Losses unsettled ..	790,992	893,312	811,979	861,973	880,840
Sundry creditors, etc. ..	1,138,306	1,822,914	1,970,797	1,815,836	2,010,505
Dividends, etc., to pay ..	279,618	310,333	322,257	326,287	311,187
Life assurance funds (b) ..	136,732	480,608	736,083	947,669	1,083,941
Total Liabilities ..	10,741,079	13,172,864	14,561,636	15,038,945	15,923,480
INVESTMENTS AND OTHER ASSETS.					
	£	£	£	£	£
Loans on mortgage ..	1,137,746	1,020,195	995,702	908,972	896,838
Government securities, etc. ..	4,969,458	6,433,893	7,274,220	8,177,285	8,869,090
Landed and other property ..	1,322,642	1,743,536	1,929,951	2,001,155	2,227,934
Fixed deposit, etc. ..	1,193,627	1,623,028	1,440,612	1,119,008	1,171,420
Loans on life policies (b) ..	4,297	8,795	17,062	18,844	21,876
Investments ..	183,804	65,681	93,704	98,630	101,069
Cash and bills receivable ..	832,630	584,694	785,979	706,739	725,441
Sundry debtors and other assets ..	1,091,875	1,693,042	2,024,406	2,008,312	1,909,812
Total assets ..	10,741,079	13,172,864	14,561,636	15,038,945	15,923,480

(a) Including amount required as reserves against unexpired risks.

(b) Some of the companies transact Life Business.

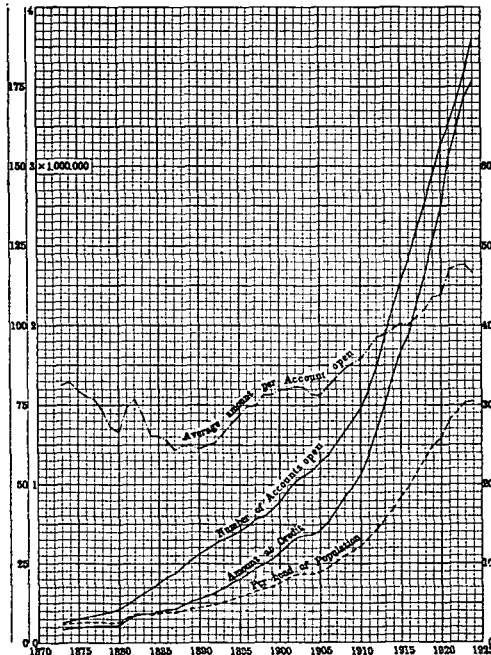
(iv) *Marine Insurance.* Separate returns regarding this branch of insurance are not available. Act No. 11 of 1909, "An Act relating to Marine Insurance," passed by the Commonwealth Parliament, and assented to on the 11th November, 1909, altered the conditions under which marine policies had up till then been issued.

CHEQUE-PAYING BANKS, AUSTRALIA, 1879 TO 1924.



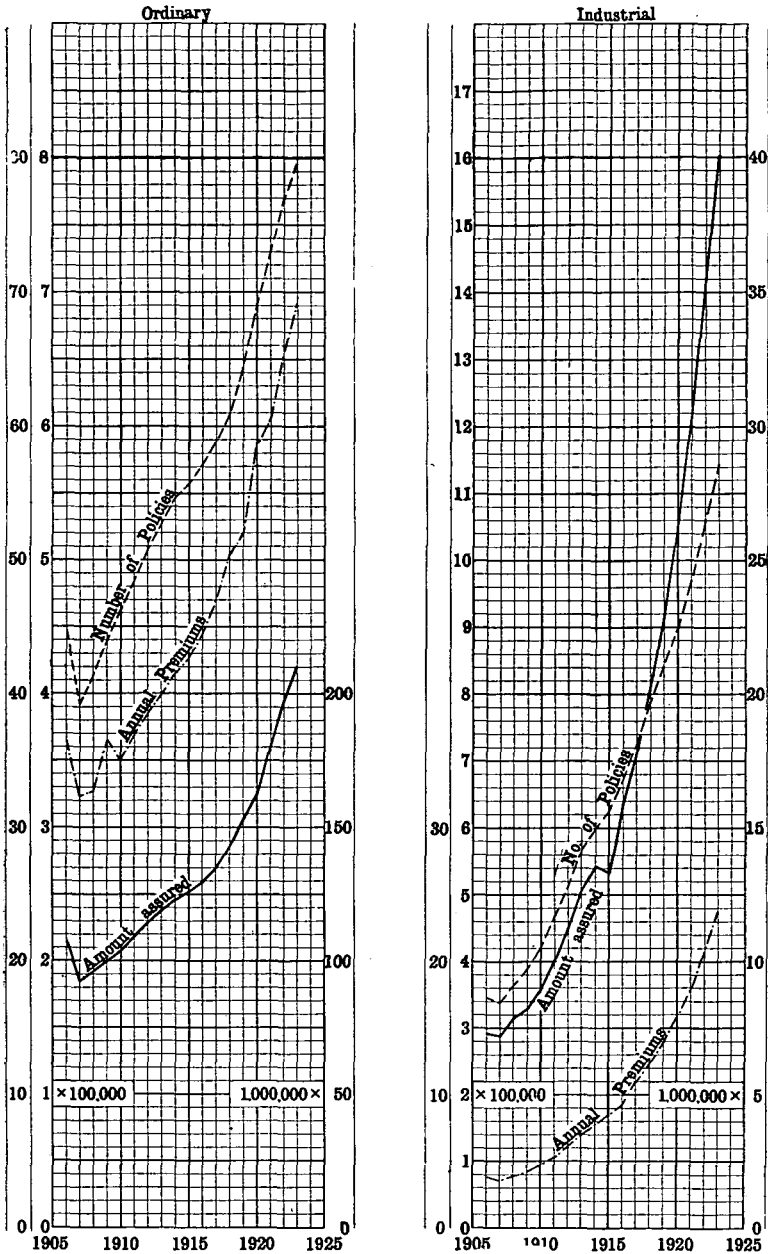
EXPLANATION.—The base of each small square represents an interval of one year, and its vertical height a sum of £5,000,000.

SAVINGS BANKS, AUSTRALIA, 1873 TO 1924.



EXPLANATION.—The base of each small square represents an interval of one year. Of the two scales on the left, the outer one shows the amount at credit, and the inner one the number of depositors, while the vertical height of each small square represents £2,500,000, and 50,000 in number. The scale on the right shows the average amount per depositor, and per head of population, while the vertical height of each small square represents £1.

LIFE ASSURANCE, ORDINARY AND INDUSTRIAL DEPARTMENTS.—AUSTRALIA,
1906 TO 1924.



EXPLANATION.—The base of each small square represents in each graph an interval of one year.

In the case of the "Ordinary" Assurance graph there are three scales—two on the left—the outer one representing the Annual Premiums, and the inner one the number of Policies in force,—and one on the right representing the Amount Assured, exclusive of bonus additions. The vertical height of each small square represents £100,000 premium, 10,000 in number and £5,000,000 in sum assured.

In the case of the "Industrial" graph, the outer scale on the left represents the Annual Premiums, and the inner scale the number of Policies in force. The scale on the right represents the Amount Assured, exclusive of bonus additions. The vertical height of each small square represents £100,000 premium, 20,000 in number; and £500,000 in sum assured.

§ 7. Friendly Societies.

1. **General.**—Friendly societies are an important factor in the social life of the community, as probably one-third of the total population of Australia comes either directly or indirectly under their influence. Their total membership is over 500,000, but as certain benefits, such as medical attendance and free medicines, and in many cases funeral expenses, are granted to members' families as well as to members themselves, this figure must, even when due allowance is made for young and unmarried members, be multiplied by about four to arrive at the total number of persons more or less connected with these societies. Legislation has conferred certain privileges on friendly societies, but, on the other hand, it insists on their registration, and it is the duty of the Registrars in the various States, prior to registering a new society, to see that its proposed rules are conformable to the law, and that the scale of contribution is sufficiently high to enable the promised benefits to be conferred on members. Societies are obliged to forward annual returns as to their membership and their finances to the Registrar, and reports are published in most of the States dealing with the returns thus received.

In the following tables the figures refer to the year 1923, with the exception of New South Wales and Victoria, the figures for which relate to the year and the eighteen months ended 30th June, 1924, respectively.

2. **Number of Societies, Lodges, and Members.**—The number of different societies and lodges, the total number of benefit members at the end of the year, and their average number during the year are shown in the following table :—

FRIENDLY SOCIETIES.—SOCIETIES, LODGES, AND MEMBERS, 1923.

State.	Number of Registered Friendly Societies.	Number of Lodges.	Benefit Members at end of year.	Average No. of Benefit Members during the year.
New South Wales	34	2,158	204,617	201,442
Victoria	60	1,469	153,840	150,264
Queensland	18	615	59,649	58,625
South Australia	17	632	72,454	71,810
Western Australia	15	290	19,590	19,309
Tasmania	20	190	24,660	24,212
Total .. ..	..	5,354	534,810	525,662

With regard to the number of registered Friendly Societies no total is given for Australia, since many of the societies operate in all the States.

3. **Sickness and Death Returns.**—Sick pay is generally granted for a number of months at full rates, then for a period at half rates, and in some societies is finally reduced to quarter rates. The following table shows the total number of members who received sick pay during the year, the number of weeks for which they received pay in the aggregate, and the average per member sick, and further the number of benefit members who died during the year, together with the proportion of deaths per thousand average members :—

FRIENDLY SOCIETIES.—SICKNESS AND DEATH RETURNS, 1923.

State.	Number of Members who received Sick Pay.	Total Number of Weeks Sick Pay Granted.	Average Number of Weeks per Member Sick.	Deaths of Benefit Members and Wives.	Proportion of Deaths to 1,000 Average Benefit Members.
New South Wales ..	(a)	(a)	(a)	(a)	(a)
Victoria(c)	41,698	405,034	9.71	2,927	12.59
Queensland	11,919	84,474	7.09	484	8.26
South Australia ..	13,711	129,116	9.42	1,013	14.11
Western Australia ..	3,256	24,405	7.50	147	7.61
Tasmania	5,007	39,854	7.96	295	12.18
Total	(b) 75,595	(b) 682,883	(b) 9.03	(b) 4,866	(b) 11.99

(a) Not available.

(b) Exclusive of New South Wales.

(c) For eighteen months.

4. *Revenue and Expenditure.*—(i) *Revenue.* The financial returns are not prepared in the same way in each State, but an attempt has been made in the subjoined table to group the revenue under the main headings :—

FRIENDLY SOCIETIES.—REVENUE, 1923.

State.	Entrance Fees, Members' Contributions, and Levies.	Interest, Dividends, and Rents.	All other Income.	Total Revenue.
	£	£	£	£
New South Wales	711,058	150,427	58,878	920,363
Victoria (a)	757,582	281,116	154,852	1,193,550
Queensland	213,727	63,841	(b)	277,568
South Australia	215,994	88,750	19,142	323,886
Western Australia	63,248	19,716	22,548	105,512
Tasmania	78,118	16,520	13,382	108,020
Total	2,039,727	620,370	268,802	2,928,899

(a) For eighteen months.

(b) Included in interest, dividends, and rents.

(ii) *Expenditure.* The returns relating to expenditure are more complete than those for revenue. The figures show that the excess of revenue for the year was £605,429 for Australia. The revenue exceeded the expenditure by more than one pound per average benefit member.

FRIENDLY SOCIETIES.—EXPENDITURE, 1923.

State.	Sick Pay.	Medical Attendance and Medicine.	Sums Paid at Death of Members and Members' Wives.	Adminis- tration.	All other Expendi- ture.	Total Expendi- ture.
	£	£	£	£	£	£
New South Wales	247,567	280,827	64,548	145,977	37,867	776,786
Victoria (a)	260,081	306,930	49,381	147,207	141,697	905,296
Queensland	61,720	83,404	25,040	45,127	..	215,291
South Australia	76,127	74,677	32,562	42,877	12,606	238,849
Western Australia	17,379	23,714	6,727	20,384	23,164	91,368
Tasmania	27,403	26,791	15,124	16,510	10,052	95,880
Total	690,277	796,343	193,382	418,082	225,386	2,323,470

(a) For eighteen months.

It appears from the above figures that sick pay averaged about 20s. per week, but, as the returns include pay at half and quarter rates, and as the proportion of these to full rates is not stated, the average given must be taken for what it is worth. Medical attendance and medicine came to about 23s. per average benefit member.

5. *Funds.*—The two foregoing tables show that the surplus of revenue over expenditure in five States amounted to £605,429 for the year, and a small surplus must, of course, result annually in every society which levies adequate contributions to enable it to meet all possible claims. These accumulations of profits are generally invested, and the subjoined table shows the division into invested and uninvested funds :—

FRIENDLY SOCIETIES.—FUNDS, 31st DECEMBER, 1923.

State.	Invested Funds.	Uninvested Funds.	Total Funds.
	£	£	£
New South Wales (b)	2,871,568	(a)	2,871,568
Victoria (b)	3,760,469	77,583	3,838,052
Queensland	1,222,909	4,134	1,227,043
South Australia	1,722,392	26,940	1,749,332
Western Australia	342,125	7,803	349,928
Tasmania	297,648	17,719	315,367
Total	10,217,111	134,179	10,351,290

(a) Included in Invested Funds.

(b) At 30th June, 1924.

The total funds amounted, therefore, to over £19 per member at the close of the year under review.

§ 8. Probates.

1. Probates and Letters of Administration.—The value of the estates left by deceased persons gives a fair view of the distribution of property among the general population. There were in 1923, 42,374 deaths of adult persons, while the number of probates and letters of administration granted during the same period was 16,955. It would therefore appear that about two-fifths of the adults who died during the year were possessed of sufficient property to necessitate the taking out of probate. The details for each State are shown in the table hereunder :—

PROBATES AND LETTERS OF ADMINISTRATION, 1923.

State.	Number of Estates.			Net Value of Estates.		
	Probates.	Letters of Administration.	Total.	Probates.	Letters of Administration.	Total.
				£	£	£
New South Wales (b)	6,281	(a)	6,281	16,429,860	(a)	16,429,860
Victoria	4,616	1,667	6,283	15,070,725	(a)	15,070,725
Queensland	933	140	1,073	3,406,406	188,061	3,594,467
South Australia	1,430	393	1,823	3,798,411	245,136	4,043,547
Western Australia	607	300	907	1,155,512	203,334	1,358,846
Tasmania (b)	458	111	569	1,211,401	72,237	1,283,638
Northern Territory (b)	9	10	19	5,242	764	6,006
Total	14,334	2,621	16,955	41,077,557	709,532	41,787,089

(a) Included with Probates.

(b) For year ended 30th June, 1924.

2. Intestate Estates.—The number of intestate estates placed under the control of the Curator during the year, and the amount of unclaimed money paid into Consolidated Revenue in each State during the year 1923, are given hereunder :—

INTESTATE ESTATES, 1923.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.Ter.	Total.
Intestate estates placed under control of Curator during 1923 —								
Number	(a)	429	1,119	216	252	103	8	(b) 2,127
Value	£ (a)	55,661	415,161	91,116	12,346	53,585	60	(b) 627,929
Unclaimed money paid into Consolidated Revenue by Curator during 1923 £	74,477	6,943	9,872	1,680	3,614	..	316	96,902

(a) Included with Probates.

(b) Exclusive of New South Wales.

CHAPTER IX.

EDUCATION.

§ 1. Evolution of Educational Systems in Australia.

1. *Educational Systems of the States.*—(i) *Place of New South Wales in Australian Education.* The first settlement in Australia being in New South Wales, it is but natural that Australian education should have had its beginning in that State. In the evolution of educational method and system in Australia, New South Wales also has played a leading part, and has had practically a dominating influence. The subject is dealt with in some detail in No. I. and No. II. issues of the Commonwealth Official Year Book, but it is not proposed to repeat it in the present volume. (See also 2 hereunder.)

(ii) *Educational Systems of other Commonwealth States.* A more or less detailed account of the origin and development of the educational systems of the other States also appears in No. I. and No. II. issues of the Year Book. Later details are given hereunder.

(iii) *Medical Inspection of State School Children.* See Chapter XII. Public Hygiene.

2. *Recent Development in State Educational Systems.*—(i) *New South Wales.* In previous issues of the *Year Book* a brief account was given of the development of the New South Wales educational system since the year 1911. (See *Year Book* No. 17, p. 447.) Reference was made to the linking-up of the State School System with the University following on the passing of the University Amendment Act and Bursary Endowment Act of 1912, to the influence on attendance of the provisions of the amending Public Instruction Act of 1916, to the increased attention devoted in recent years to school hygiene and to medical and dental inspection, and to the methods adopted of dealing with the problem of the backward or deficient child. Attention was also directed to the spread of agricultural teaching by the establishment of special agricultural schools together with the special "rural schools" in country centres. (See also § 2, 4 (v) hereinafter.)

An important change which came into operation in 1923 was the re-imposition of fees for high school instruction. Exemption from payment is granted under certain conditions, but it is estimated that the revenue from this source will amount to about £20,000 annually, and it is proposed to apply this towards meeting interest charges on loan money used in meeting the growing demands for primary school purposes.

In his Report for the year 1923 the Minister again draws attention to the disabilities under which the Education Department was labouring owing to shortage of teachers and lack of necessary funds for new buildings, equipment, and renovations. During 1923 an amount of £500,000 was obtained from loans and a sum of £100,000 voted in the ordinary way for expenditure on buildings. These funds were utilized in the provision of urgently needed works, and it is hoped shortly to satisfy all reasonable requirements,

Excellent work is being done by the Parents and Citizens' Associations which have replaced the old School Boards.

(ii) *Victoria.*—Some account of the development of educational activity in Victoria up to the close of the year 1922 was given in the preceding issue of this volume (See No. 17, p. 448). The principal task confronting the educational authorities during the last few years has been to overtake arrears in the way of providing sufficient new schools and remodelling existing unsatisfactory buildings. Since the end of 1920 a sum of £1,650,000 has been provided from loans, and most of this has been expended or allocated to works in progress. As far as possible country schools have been dealt with first.

(iii) *Queensland.* A brief account was given in *Year Book* No. 17, p. 448, of the changes introduced into the Educational System of Queensland by the Act of 1910. Reference was also made to the establishment of High Schools in 1912, of a Teachers' Training College in 1914, of rural schools in 1917, and other matters. In 1923 classes were formed at various centres for giving special instruction to backward, sub-normal, and defective children. A travelling domestic Science School commenced operations at Cunnamulla towards the end of the year, a specially designed and equipped railway car having been constructed for this object. Apart from the rural schools and technical classes special vocational classes were opened in several centres in 1923.

(iv) *South Australia.* In the preceding issue of the *Year Book* (See No. 17, p. 449) attention was drawn to the modifications introduced into the educational system in 1921, in the way of a new course of instruction in the primary schools; the adoption of new methods of training, examination, and classification of teachers; and the revision of the system of inspection. During the year 1923 the Director visited Great Britain, the Continent, and America for the purpose of inquiring into educational matters, and of recruiting teachers to serve on the staff of the South Australian schools. Altogether 66 young male teachers were chosen, and these have already justified their selection by the fine work they are doing in their respective schools.

The substitution of local School Committees, each of which functions for one school only in place of the Boards of Advice which looked after groups of schools, has been attended by very satisfactory results. Greater provision of helpful equipment for schools has ensued, libraries have been established or extended, and playgrounds improved, &c. Excellent work has also been done by the Mothers' Clubs established in connexion with the Infant Schools.

(v) *Western Australia.* A brief account was given in *Official Year Book* No. 17, pp. 449-50 of the changes and improvements introduced into the educational system of Western Australia during the years 1912 to 1921, but considerations of space preclude its repetition in the present issue. During 1923 efforts were made at a more systematic correlation of the work done in the various courses at the central schools with the practical needs in the life work of the scholars. To assist children in the outback districts the number of special rural schools, referred to later, was increased to 30, and the system of teaching by correspondence greatly extended. Excellent work is being done by the Parents and Citizens' Associations formed in connexion with the schools. The spread of secondary education has resulted in a satisfactory increase in efficiency of candidates for the teaching profession, while satisfactory results have attended the arrangements for an interchange of teachers with the London County Council authorities.

(vi) *Tasmania.* Allusion was made in *Year Book* No. 17 (page 450) to the development on modern lines in recent years of the primary branch of the educational system of Tasmania, the establishment of secondary schools and of special infant schools, the extension of correspondence teaching, the provision of schools of method as an adjunct to a more efficient system of training teachers, and the methods adopted for dealing with the problem of retardation. Limits of space preclude the repetition of this information in the present issue. In common with other States, some difficulty has been experienced in securing suitable living accommodation for teachers in charge of outback schools, but it is hoped that this will in part be met by the projected scheme of consolidation of schools. Recently the practice has been adopted of allowing inspectors to make periodical visits to the mainland states for the purpose of gaining additional experience.

(vii) *Northern Territory.* Although the number of children of school age in the Territory is small, nevertheless ample provision has been made by the Commonwealth Government for their education. State schools are in operation at Darwin, Parap, Pine Creek, Alice Springs, and Emungalan. There is also a school for aboriginal and half-caste children at Kahlin Compound, Darwin. A satisfactory standard is maintained at the schools, but progress is somewhat retarded by irregular attendance. In January, 1922, a High School was opened at Darwin. The head master of the Darwin School makes periodical visits of inspection to the other schools, and it is proposed to arrange for an additional inspection by an officer from one of the State Education Departments. A library has been established in connexion with the Darwin School, and parcels of books are lent to the other State Schools at stated intervals.

(viii) *Present Position of State Education in Australia.* Throughout Australia primary education is compulsory and free, while there exists in all States a more or less liberal provision of scholarships and bursaries to the Higher State Schools, to the Secondary Schools, and to the Universities. Provided that the requisite standard is reached, it is, of course, permissible for children to receive home tuition, or to attend so-called private schools. The orientation, lighting, and ventilation of school buildings are being modernized. In all of the States periodical medical inspection of the children is in force. (A detailed statement of the work being done in this direction will be found in the chapter dealing with Public Hygiene.) Methods of training teachers are now better developed, and although the "pupil teacher" system with its effects have not been wholly eliminated,

it appears to be gradually vanishing. (The methods adopted in the various States for the selection and training of teachers are described in some detail in § 2, 6, hereinafter.) There has been a wider employment of kindergarten and Montessori principles in the early stages, and the more or less purely abstract teaching of the older days has been largely replaced by concrete methods. Self-activity on the part of the pupils is being further cultivated by the partial adoption of the "Dalton" system or modifications thereof. Such subjects as nature study, manual training, music, drawing, business practice, and domestic economy have received a general impetus. Greater attention has been given to the scientific classification of pupils, and to the difficult problem of dealing with sub-normal or defective children. (In the Report of the Education Department of South Australia for the year 1923, the Medical Inspector asserts that a large proportion of juvenile delinquency is due to mental deficiency.) Moreover, as will be seen from the above, and from § 2, 4, the State Education Departments are increasing their activities in the direction of secondary education. Lastly, the system of inspection has been considerably remodelled. Under the old system, the inspector was little more than an examining officer, but, under the present régime, the primary duty of this officer consists in guiding and directing the teaching in accordance with approved methods. [See also § 6, Technical Education.]

(ix) *Co-ordination of Educational Activities.* As pointed out already, the educational system of New South Wales may now be considered as a more or less homogeneous entity, the various stages succeeding one another by logical gradation from kindergarten to university. In the other States development is proceeding on somewhat similar lines, activity in this respect being greatly helped by Inter-State conferences of directors of education and of inspectors and teachers. Several important resolutions were adopted at the fifth annual Conference of Australian teachers, which was held in Melbourne early in 1925. Amongst others, motions were passed advocating the following:—(a) The abolition of the junior teacher. (b) The supply of well-trained teachers for outback districts. (c) The establishment of a school of domestic science at the University in each State. (d) Extension of the scope of commercial education. (e) Provision of systematic methods of studying the suitability of children for various callings. (f) Right of access by teachers to the Federal Arbitration Court.

§ 2. State Schools.

1. *General.*—The State Schools, or, as they are sometimes termed, the "public" schools, of Australia comprise all schools directly under State control, in contradistinction to the so-called "private" schools, the bulk of which, though privately managed, nevertheless cater for all classes of the community. Separate information regarding Technical Education is given in § 6.

2. *Returns for Year 1923.*—(i) *General.* The following table shows the number of State Schools, together with the teachers employed and the enrolment and "average attendance" in each State during the year 1923:—

STATE SCHOOLS.—RETURNS, 1923.

State or Territory.	Schools.(a)	Teachers.(b)	Scholars Enrolled.	Average Attendance.	Percentage of Attendance on Enrolment.
New South Wales(c)	3,473	9,879	308,535	257,841	83·6
Victoria	2,589	7,186	237,006	183,472	77·4
Queensland	1,690	4,054	133,516	102,279	76·6
South Australia	992	2,634	82,192	66,707	81·2
Western Australia	795	1,950	55,258	48,551	87·9
Tasmania	507	1,191	32,142	26,200	81·5
Northern Territory	7	12	233	183	78·5
Australia	10,053	26,906	848,882	685,233	80·7

(a) Schools open during year.

(b) Exclusive of sewing mistresses.

(c) Including Federal Capital Territory.

Unfortunately, the schemes of enrolment and of the computation of "average attendance" are not identical in each State, so that the comparisons are imperfect.

(ii) *Schools in the Federal Capital Area.* During the year 1923 sixteen State Schools were in operation in the Federal Capital Territory (Yass-Canberra). The pupils enrolled numbered 494 and the average attendance 328. Cost of upkeep amounted to £5,704. By arrangement with the Federal Government these schools are conducted by the New South Wales Education Department on the same lines as the ordinary State Schools, the Department being recouped for expenditure.

3. Growth of Enrolment and Attendance.—The enrolment and average attendance at the State Schools in Australia are given below for the years 1891, 1901, 1911, and for each year of the period 1919 to 1923 :—

STATE SCHOOLS.—ENROLMENT AND ATTENDANCE.—AUSTRALIA, 1891 TO 1923.

Year.	Total Population (a)	Enrolment.	Average Attendance.	Year.	Total Population (a)	Enrolment.	Average Attendance.
1891 ..	3,421	561,153	350,773	1920 ..	5,411	801,405	632,182
1901 ..	3,825	638,478	450,246	1921 ..	5,509	819,042	666,498
1911 ..	4,573	638,850	463,799	1922 ..	5,633	837,426	688,264
1919 ..	5,304	782,317	608,069	1923 ..	5,750	848,882	685,233

(a) At 31st December, in thousands.

The comparatively small attendance in 1919 as against that in subsequent years was chiefly due to the epidemic of influenza, which particularly affected the returns for New South Wales. In 1923 the percentage of attendance on enrolment for Australia was 80.7. as compared with 82.2 per cent. in 1922, the decrease being due chiefly to the prevalence of epidemics of measles, whooping cough, and other ailments in New South Wales, Victoria, and Tasmania. The attendance in Queensland was also adversely affected by unfavourable weather conditions.

4. Distribution of Educational Facilities.—(i) *In Sparsely-settled Districts.* It has always been the aim of the State to carry the benefits of education into the remotest and most sparsely-settled districts. This is effected in various ways :—(a) By the establishment of Provisional Schools, i.e., small schools in which the attendance does not amount to more than about a dozen pupils, these institutions merging into the ordinary public school list when the attendance exceeds the minimum : (b) When there are not enough children to form a provisional school, what are known as Half-time Schools are formed, the teacher visiting them on alternate days : (c) In still more sparsely-peopled districts, an itinerant teacher goes from house to house within a certain radius. Thus, in Queensland during 1923 the 16 itinerant teachers' districts covered 489,000 square miles of country, while a distance of 59,384 miles was travelled in visiting 1,445 children. In this State also the Education Department has established what are known as Saturday Schools, in which small groups of children in outlying districts are visited by the nearest teacher on Saturdays and receive the benefit of several hours' instruction. These schools, of which there are ten, have been warmly welcomed in the districts in which they are established, inasmuch as under this system the children "outback" receive a greater amount of instruction than is possible under the system of itinerant teachers. Provision has been made for a vocational "top" to be established at schools in important distributing centres of inland pastoral areas in Queensland, and special classes receive instruction in manual work, commercial work, and domestic economy. Itinerant teachers capable of imparting instruction in domestic and manual work have also been appointed to visit parents and children at various localities in the Central District. Further, in New South Wales, Victoria, South Australia, Western Australia and Tasmania parents in the thinly-peopled areas are allowed to club together and build a school, which receives aid from the Government in the form of a yearly subsidy and grant of school material. In some cases the Department also provides the building. During 1923 subsidy was

paid to 682 schools in New South Wales. Victoria had 7 schools of this type, Western Australia 23, and Tasmania 39: (d) Several "travelling" schools have been established in New South Wales, the teacher being supplied with a van carrying a tent for himself and one for use as a school, together with books and apparatus for primary teaching. South Australia has devised attractive portable schools to meet the needs of new districts and temporary settlements. Queensland has two travelling housecraft schools for the instruction of girls, as well as adults, in the smaller centres. Railway Camp Schools are established in some States on the sites of extensive railway works: (e) All the States provide also for education, by correspondence, of children in localities not at present reached by the methods outlined above. At the end of 1923 nearly 2,000 children were on the rolls of the four Correspondence Schools in New South Wales. In Victoria, about 200 invalid and isolated children were receiving instruction by this means. The first Correspondence School in Queensland was opened in February, 1922, with an enrolment of 37 pupils, but at the end of the year 1923 the net enrolment amounted to 1,257. In South Australia the activities of the Correspondence School at Adelaide extend as far as Point Charles in the Northern Territory, and in 1923 a Dutch family near Hermansburg Mission Station in Central Australia applied for enrolment. During the year 1923, 312 boys and 326 girls received instruction. A library has been established in connexion with the school, and the books are much appreciated by both parents and children "outback." The enrolment in correspondence classes in Western Australia during 1923 was 783, and a staff of sixteen teachers is employed on the work. In addition, 898 children at small schools, and 52 who had left school, were taking correspondence lessons in special subjects. There are nine teachers attached to the Correspondence School in Hobart, and a visiting teacher tours the whole island, calling, as far as possible, at all the isolated dwellings. The number on the roll in 1923 was about 250.

(ii) *Centralization of Schools.* The question of centralization of schools adopted so successfully in America and Canada has received some attention in Australia, and particularly in New South Wales. It is recognized that a single adequately-staffed and well-equipped central institution can give more efficient teaching than a congeries of small scattered schools in the hands of less highly trained teachers, and the small schools in some districts were therefore closed and the children conveyed to the central institution. The principle was first adopted in New South Wales in 1904, and in 1923 a sum of £36,000 was expended in boarding allowance and conveyance to central schools. Cost of conveyance to State schools in Victoria during 1923 was returned as £6,425. In South Australia the sum of £1,222 was disbursed in 1923 in connexion with travelling expenses of school children, while £13,630 was spent in Western Australia, and about £700 in Tasmania.

(iii) *Evening Schools.* Evening Public Schools have been in existence for many years in some of the States, but their progress has been uncertain. In New South Wales the 49 Evening Continuation Schools had an effective enrolment of 4,248 and an average attendance of 3,208 in 1923. The schools for boys are classed as commercial, commercial preparatory, junior technical, and junior technical preparatory, and for girls as domestic, and domestic preparatory. Attendances at the schools for boys numbered 2,513, and at those for girls 695. The comparatively high proportion of attendance to enrolment shows that the institutions are attractive. In Victoria there were 6 evening continuation classes in operation during 1923, the average attendance being 56. Although the Education Act in Victoria gives authority for the establishment of evening continuation classes at which the attendance of boys up to the age of seventeen years and living within a radius of 2 miles may be made compulsory for six hours a week, considerations of expense have prevented the free exercise of this power. Evening Continuation Schools have been established under regulation in South Australia, and are intended principally to help the working boy to improve his general education and to add to the store of knowledge most useful in his present work. Western Australia has evening continuation classes in 21 centres; the enrolment in 1923 numbered 2,823.

(iv) *Higher State Schools.* (a) *New South Wales.* In New South Wales, public schools which provided advanced courses of instruction for two years for pupils who have completed the primary course were classed as Superior Schools. These were reorganized

in 1913 as Day Continuation Schools, and divided into Superior Commercial Schools, Superior Junior Technical Schools, and Superior Domestic Schools for Girls. During 1923 there were 86 schools of this type in operation, of which 16 were in the Commercial group, 24 in the Junior Technical, and 46 in the Domestic group, with an average attendance of 10,073 in the sixth and seventh classes. It is believed, however, that greater efficiency could be produced by reducing the number of these schools and establishing Central "Superior Public Schools" instead. Provision has also been made for the more advanced education of children in country centres by the establishment of 12 District Schools. These schools, which in 1923 had an average attendance of 967, are specially staffed, and, in addition to the usual work, undertake the preparation of students for admission to the training colleges. Composite Courses were given in 1923 at 328 country schools, Course A leading to the intermediate certificate, B to the commercial superior public school certificate, and C preparing for the public service entrance examination. The average attendance at these courses was 3,047. In addition, there are 28 High Schools in the State. These had in 1923 an average attendance of 6,886. To meet the wishes of representatives of the registered Secondary Schools, the syllabus of the High Schools was amended in 1913, and now offers such a wide range of choice in the selection of subjects that there is no possibility of producing a merely stereotyped uniformity of study. The growing demand for High School education in the metropolis and in country centres led to the establishment of Intermediate High Schools, and in 1923 the number had increased to 29, with an average attendance of 4,996. In accordance with Departmental regulations, there is a liberal distribution of scholarships and bursaries to the higher State Schools and to the University. During the last quarter of 1923, 832 pupils holding bursaries were receiving instruction at High, Intermediate High, and District Schools. Under the provisions of the University Amendment Act of 1912, 200 exhibitions were awarded in 1923 to successful students at the leaving certificate examinations, 112 of these being given to State School pupils and 88 to students from registered secondary schools.

At the end of June, 1924, the bursaries held under the Bursary Endowment Act numbered 1,191. The holders of 1,074 of these were attending secondary schools, and 117 at the University. The allowances paid ranged from £12 to £65 per annum. In 1915 war bursaries to children of incapacitated and fallen soldiers were provided, the bursaries commencing at age 10 and ceasing at age 13. On the 30th June, 1924, there were 360 pupils holding bursaries of £10 per annum. In 1919 a sum of £12,500 was raised by public subscription to provide bursaries for the children of fallen or incapacitated soldiers and sailors. These bursaries are also administered by the Board, and in 1923 bursaries at the rate of £25 per annum were awarded to 10 applicants.

The Sydney Grammar School (not a "State" School in the ordinary acceptation of the term), which receives a State endowment of £1,500 a year, had, in 1923, an enrolment of 537 pupils, and an average attendance of 491.

(b) *Victoria.* In Victoria, action was taken in January, 1912, to give effect to the provisions of the Education Act of 1910, with regard to the decentralization of the system of secondary education. Forty-one Higher Elementary and 31 District High Schools have been established, and, to obviate congestion at the High Schools, Higher Elementary Classes are carried on at 23 "Central" Schools. The average attendance for 1923 at the Higher Elementary Schools was 2,839, of whom 1,398 were girls, at the District High Schools 5,981, of whom 2,880 were girls, while 1,282 boys and 1,303 girls were receiving secondary teaching in the Central Schools. The qualifications for admission to the High Schools and Higher Elementary Schools are that pupils shall be not less than 12 years of age, shall possess the qualifying certificate or its equivalent, and that their parents shall undertake that the children will remain at school for four years. For the first two years there is a common course for all pupils, thereafter replaced by four special courses:—(1) A preparatory professional course for pupils preparing to proceed to the University, to enter the teaching profession, or to gain a sound general education; (2) an agricultural course to be taken in Agricultural High Schools; (3) a commercial course; and (4) a domestic arts course for girls. Parallel with these courses an industrial course has been developed for pupils who intend to enter upon some form of industrial occupation.

The demand for places in the metropolitan High Schools is in excess of the available accommodation, and although the "Central" Schools, already referred to, have to some extent relieved the congestion, increased provision is urgently needed.

In the Junior Technical Schools pupils are enrolled at 12 and 13 years of age for a course extending over three years designed to qualify for entrance to the Senior Technical Schools. There were 26 of these junior schools in operation at the end of 1923 with a net enrolment of 4,618 pupils.

Schools of Domestic Arts have been established—five in Melbourne, one in Ballarat, and one in Bendigo. At these institutions, in addition to continuing their general education, the girls receive special instruction in cookery, needlework, and various home duties. A modified course in domestic arts is given to senior pupils at Maryborough and Castlemaine.

Scholarships granted by the Department are as follows:—(a) One hundred junior, tenable for four years at a District High School or approved Secondary School, with allowance of £26 per annum for board when required; (b) Forty-four senior, tenable three to six years, with allowance of £40 towards expense of course at University; (c) Fifty junior technical, giving free tuition for three years at a Junior Technical or other approved school, and, in certain cases, board allowance of £26 per annum; (d) Fifty-five senior technical, giving free tuition for approved courses at Technical schools, with £30 allowance for day students, and £10 for night students; (e) Sixty teaching, similar in other respects to junior; (f) Twenty nominated courses, giving four to five years' free tuition in agriculture, mining, or veterinary science at the University, with allowance in certain cases for maintenance; (g) Fifty free places in any course at the University with tenure up to six years, open to candidates attending district high schools, technical schools, and registered secondary schools. Allowances are also made in some cases to high school and technical school pupils whose parents are in necessitous circumstances, while free tuition is granted to all children of deceased or totally incapacitated soldiers and sailors.

(c) *Queensland.* Prior to the year 1912, Queensland did not possess any distinctly secondary schools under State control, but in February of that year High Schools were opened at Warwick, Gympie, Bundaberg, Mount Morgan, Mackay, and Charters Towers. Tuition at these schools is free, but students must pass a qualifying entrance examination. Three courses of study—General, Commercial and Domestic, are provided. The General Course leads up to the University, and students are enabled to matriculate from the High Schools. In 1917 and 1920 High Schools were opened at Gatton and Roma respectively. High Schools ranking in all respects with those mentioned are also conducted at Brisbane Central Technical College and at the Technical Colleges at Toowoomba and Rockhampton, and "The Brisbane Junior High School" was opened in 1920. In smaller centres where an average of not less than 25 qualified pupils can be obtained, secondary tuition is provided at existing State Schools, and this was arranged for at Herberton, Childers, Dalby, Kingaroy, Pittsworth, Southport, Cairns, Wynnum Central, and Emerald. The enrolment at High Schools in 1923 was 2,096, and the daily attendance 1,336. There are, moreover, ten Grammar Schools—six for boys and four for girls—each of which was subsidized by the State to the extent of £750 per annum, and in addition received a payment of £250 per annum for providing five scholarships for State scholars. Owing to representations regarding increased cost of maintenance, the grants were increased in 1920, and the total endowment paid to these schools in 1923 amounted to £17,800. The Government also pays *per capita* fees in payment for the tuition of state scholarship-holders in attendance at the Grammar Schools. During 1923 the payments for fees came to £14,837. The enrolment at the Grammar Schools in 1923 was 1,956 and the average attendance 1,610. Since the year 1909 these schools have been regularly examined by the inspectors of the Education Department.

Scholarships covering a period of four and a half years at a secondary school are granted on the results of examination. In the case of holders who live away from home while attending a secondary school the allowance is £30 per annum, but holders who live at home receive free text-books and an allowance of £4 per annum.

As a result of the 1923 examinations, held in April, scholarships were awarded to 351 pupils. Of the successful candidates 219 were granted the allowance of £4 per annum and free text-books, and 132 received the allowance of £30.

Prior to the establishment of the Queensland University, three exhibitions per annum to approved Universities were granted. These were instituted in 1878, and in all 96 exhibitions were granted. With the opening of a local University in 1910, the necessity for such exhibitions disappeared, and, since 1911, their place has been taken by twenty scholarships annually to the Queensland University. Each scholarship is tenable for three years, and carries an allowance of £26 per annum if the holder lives at home and attends the University, or £52 per annum board allowance where necessary.

(d) *South Australia.* Including the Adelaide High School, there were altogether 23 High Schools open in South Australia in 1923, with an enrolment of 3,795, an average attendance of 3,180, and a staff of 153 teachers. In addition to giving secondary education, these institutions form a valuable source from which the Department can draw a supply of young teachers. Sixty qualifying exhibitions to these schools are open to pupils who have completed the primary course, 50 of such exhibitions being reserved for country children. The exhibitions are of the value of £10 each, with an additional allowance of £20 per annum if it is necessary for the holder to live away from home.

The Department has also established 16 Higher Primary Schools in order to provide increased facilities for higher education to country children. These schools cover the first and second years' work at the High Schools, and students who complete this work may compete for 24 junior exhibitions tenable for three years at a High School.

Pupils from the High Schools may compete for 12 bursaries tenable at the University, the School of Mines, or the Roseworthy Agricultural College. The bursaries carry exemption from fees, with an allowance of £20 per annum, which may be increased to £40 if the bursar is living away from home.

(e) *Western Australia.* The Perth Modern School was opened in 1911 and the Eastern Goldfields High School at Kalgoorlie in 1914. District High Schools providing three-year courses up to the standard of the Junior Certificate were opened in 1917 at Northam and Geraldton, and at Albany and Bunbury in 1918. Northam was made a full High School in 1921 and Bunbury in 1923. The enrolment at the six High Schools in 1923 was 1,236 and the average attendance 1,170. In addition, the primary schools include a number of Central Schools in which the upper classes are collected from various contributory schools in the surrounding districts. These schools provide graduated professional, commercial, industrial, and domestic courses. Altogether 2,946 pupils were taking these courses, and if to this number the 622 children enrolled at the large country towns be added, the total enrolments amount to 3,568. Entrants to State secondary schools must have passed an examination identical with that for secondary school scholarships, and boarding allowance up to £30 per annum is provided where necessary. Evening continuation classes were attended at 21 centres in 1923 by about 2,800 pupils. The classes are intended to provide some measure of higher education to those who leave school as soon as they reach the compulsory age of 14 years. Admission to these classes is free, but pupils must attend regularly three evenings a week. A scheme of carefully compiled correspondence lessons with the object of giving some measure of secondary education to suitable scholars in scattered country areas has also been arranged (See 4, 1 ante).

Fifty scholarships tenable for 3 years (with possibility of extension to five years) at approved secondary schools are annually offered for boys and girls attending Government or other efficient schools. The scholarships entitle the holders to receive a grant for books and travelling expenses. Boarding allowance up to £30 per annum may also be granted where necessary. Scholarships to enable children from country districts to attend at District High Schools or the Narrogin School of Agriculture were inaugurated in 1917. Only those children who must live away from home are eligible, and the tenure may in some cases be extended to 5 years. The scholarships carry an allowance of £30 per annum. During 1923, 43 District High School Scholarships, and 11 tenable at the Narrogin School of Agriculture were awarded. Twelve scholarships also are awarded to children of fallen or disabled soldiers. The scholarships are tenable for 3 years, renewable for a further term of 2 years, and, where necessary, carry an allowance of £30 per annum. Two scholarships at the University are offered on the results of the school leaving examination.

(f) *Tasmania.* Up to the year 1912 the Department confined its efforts to the provision of primary education for the school children in Tasmania. In 1911, however, super-primary classes were formed in the larger schools, with an enrolment in 1911 of 200, and in 1912 of 400 pupils. It was recognized, however, that the previously existing scheme of scholarships and exhibitions was inadequate to meet the demands for higher education. High Schools were therefore opened in January, 1913, at Hobart and Launceston, and later on at Devonport, Burnie, Huonville, and Scottsdale. The enrolment and average attendance at the High Schools in 1923 were 806 and 749 respectively. These provide for five classes of pupils—(i) Those who desire to become teachers; (ii) University students; (iii) Commercial; (iv) Mechanics; (v) Home duties (girls). The full secondary course covers five years. Under the Bursaries Act of 1915 five junior city bursaries tenable for three years at a State or registered Secondary School and carrying allowances up to £16 were awarded, also seventeen junior bursaries for country children with allowances up to £46, and six for children in country schools of the fourth to the seventh class with allowances up to £46 tenable for three years. The Bursaries Board awarded 12 junior city bursaries, 7 junior country bursaries, 6 senior city bursaries, and 9 senior country bursaries in 1923.

(v) *Agricultural Training in State Schools.* (a) *New South Wales.* During 1921 the whole subject of agricultural education was revised, and, under a Supervisor of Agriculture, a definite course of scientific and practical instruction was evolved. This course is now being taken at the residential schools at Hurlstone and Yanco, and it is proposed to establish similar schools in other parts of the State. The necessary number of teachers to initiate the work has been provided, and students will be trained at the University to meet future requirements. Proposals were also under consideration for the establishment also of (1) an Agricultural Continuation School in the metropolis, giving a two years' course in elementary agriculture to boys unable to attend a High School, and a course in domestic science and horticulture for girls; (2) Rural Schools, giving a course in elementary agriculture, nature study, and farm mechanics for boys, and domestic science and horticulture for girls; and (3) re-organization of Rural Camp Schools. In 1923 the rural course was in operation in twelve country schools. The course extends over three years, and includes such subjects as elementary agriculture, applied farm mechanics, and rural economics in the case of boys, while the girl pupils receive training in domestic science and horticulture. A model farm, varying in extent from 1 to 5 acres, is attached to each school. Average attendance at these schools in 1923 was 524.

(b) *Victoria.* In Victoria, what are termed Agricultural High Schools have been established at Ballarat, Colac, Leongatha, Mansfield, Mildura, Sale, Shepparton, Wangaratta, Warragul, and Warrnambool. Pupils must be at least fourteen years of age, and have passed beyond the curriculum of the elementary school, or else be able to afford satisfactory proof that they are qualified to profit by the instruction offered. The schools are practically secondary schools with an agricultural bias, and form a link between the rural school and the agricultural college. They are also used as a preliminary stage in the education of boys and girls who wish to become teachers and eventually graduate in the State Training College and the University. At some of the schools short courses in agriculture have been instituted for farmers' sons who have left school. A local council is appointed for each school, and exercises a general oversight over its operations. The experimental plots at these schools have aroused much interest among the farmers from the surrounding districts. A Supervisor of Agriculture reports and gives advice on the teaching of agriculture in the State Schools. A fair number of teachers have gained diplomas in agriculture, and are capable of giving practical instruction at the High Schools. Schools of Agriculture are conducted by the Agricultural Department at the State Research Farm, Werribee. Teachers in the wheat-growing districts are also instructed for short periods by the organizing Inspector of Agriculture at the University, and their services are utilized as leaders or group supervisors in their districts. The elementary principles of agriculture are taught in a large number of State Schools, and progress has been made in the direction of establishing agricultural clubs and home-project organizations. A Horticultural Society has been established, with a number of schools in affiliation, while practical help in school gardening is afforded by the departmental supervisor. The Society has a nursery and distributing centre for plants and

seeds at Oakleigh, and sub-nurseries have been established at various schools. Recently an officer has been detailed to promote the establishment of school plantations on blocks adjacent to school properties, the subsequent care of the trees, etc., to be undertaken by the pupils.

(c) *Queensland.* In Queensland the Government provides a small grant to encourage the study of agriculture, horticulture, and kindred subjects in the State Schools, while a departmental teacher of agriculture visits the schools and gives assistance in agricultural, horticultural, and nature study work. Excellent experimental work has been carried out at some of the schools, and gardens have been established wherever circumstances permitted. Cotton culture was undertaken by some hundreds of schools, in many cases with marked success, the product being harvested and sold at a satisfactory price. Several of the schools, with their surroundings of well-grown shade and ornamental trees, make attractive spots in the country landscape. In some cases forestry work has been taken up by schools, and, with the aid of the Forestry Department, it is proposed where feasible to plant school reserves with commercial timbers. Short courses of instruction for teachers have been instituted at the Gatton College. This institution was placed under the control of the Education Department in September, 1923, and was re-organized so as to include an Agricultural High School, which, in addition to ordinary secondary education, will provide graded courses in agriculture. Provision has also been made for non-resident students, and vacation courses have been arranged for State School teachers. A large number of teachers have gained a practical knowledge of milk and cream testing and dairy farming methods generally, and the subject is now added to the programme of instruction in several of the dairying districts. The practical advice and help given has resulted in many instances in marked improvement in the dairy herds. At Nambour, a Rural School, the first of its type, was opened early in 1917. In addition to the ordinary subjects of the curriculum, this school provides for instruction in farming, fruit growing, dairying, etc., with dressmaking, millinery and cookery for girls, and woodwork, leatherwork, and tinsmithing for boys. Training in business methods, shorthand and typewriting is also available. Supplies of trees for distribution to other schools are raised at Nambour, and many schools distribute trees and plants for home planting. In view of the success of this institution, schools of somewhat similar type have been established at Boonah, Gracemere, Marburg, and Home Hill, and it is proposed to open others early in 1924 at Gordonvale, Murgon, Clifton and Gayndah. A new feature of the year's work in 1923 was the successful inauguration of "home project" schemes, whereby subjects of practical agricultural interest are studied out of school hours.

(d) *South Australia.* In South Australia the Public Schools' Floral and Industrial Society, founded in 1880, holds annual exhibitions of school work from all parts of the State. In addition, it has for some years undertaken the distribution of flower seeds among school children at a very cheap rate, and has thus fostered the love of horticulture. A special instructor has been appointed to give assistance to teachers desirous of making their school gardens aid in nature study work. Assistance is given by personal visits as well as by correspondence, and by instruction at vacation Summer Schools. Teachers in training receive instruction in Nature knowledge and the art of conducting Nature Studies. A seed wheat competition amongst school children inaugurated in 1911 proved very successful, a second, which was commenced in 1916, concluded in 1920, and a third in 1921. In 1919 two of the competitors who entered on the work of wheat-breeding produced wheat of such quality that they were unable to supply the orders for seed grain received from South Australia, as well as from other States. Milk-testing is carried out in several schools, and the agricultural training generally is greatly helped by the practical co-operation of the farmers. In 1923 a Forest Camp School was held during the summer and autumn months in the Kuitpo forest, the scholars receiving practical training in forestry and allied subjects. At Murray Bridge the High School course includes agriculture and dairying.

(e) *Western Australia.* In Western Australia an advisory teacher of nature study visits the schools and gives advice in regard to proper methods in horticulture and experimental agricultural work. The number and usefulness of the gardens and experimental plots attached to State Schools show marked improvement each year. Special attention is being given to the needs of the country schools, and as far as possible the instruction

is given a practical bias. In some districts definite projects are undertaken of importance to a rural community, *i.e.*, vegetable growing, bee-keeping, and pig and poultry-keeping. The boys are also trained in useful manual work, and the girls, wherever possible, are taught simple cookery, and the drying and preserving of fruit and vegetables. Thirty special rural schools have been established in different parts of the State, and the project system has as far as possible been made portion of the curriculum. Early in 1914 a school was opened on the Narrogin State Farm. The pupils are taken directly from the primary schools, and the course of instruction lasts for two years. On its completion students are qualified to enter on the diploma course at the University. The school was brought under the control of the Education Department in 1921, and has so justified its existence that it cannot accommodate all the applicants for admission. During 1923 there were over 60 students. Provision has been made for practical work in agriculture at the High School at Northam, and, by arrangement, some of the pupils spend a portion of their time each year at the State Experimental Farm at Merredin. The Education Department is also interesting itself in finding employment on farms for town boys who have difficulty in obtaining employment at home.

(f) *Tasmania.* In Tasmania the organizing teacher of nature study visits and advises the teachers at the State Schools, and also gives addresses and model lessons at the schools of instruction. Considerable success has attended the establishment of classes in Hobart for instruction in apple-grading and packing, and similar classes have been formed at several other centres.

5. Teachers.—The distribution of the teaching staff in the State Schools during the year 1923, including teachers of needlework, was as follows :—

STATE SCHOOLS.—TEACHING STAFF, 1923.

State.	Principal Teachers.		Assistants.		Pupil or Junior Teachers.		Sewing Mis- tresses.	Total.		
	Males.	Fem.	Males.	Fem.	Males.	Fem.		Males.	Fem.	Total.
New South Wales ..	2,299	1,221	1,861	4,498	..	..	187	4,160	5,906	10,066
Victoria ..	1,610	1,156	584	1,940	407	1,489	388	2,601	4,973	7,574
Queensland ..	974	695	574	1,402	147	262	..	1,695	2,359	4,054
South Australia ..	438	495	390	973	108	230	143	936	1,841	2,777
Western Australia ..	414	435	188	715	36	162	95	638	1,407	2,045
Tasmania ..	199	280	67	346	60	239	3	326	868	1,194
Northern Territory	2	..	2	7	..	1	..	4	8	12
Total ..	5,936	4,282	3,666	9,881	758	2,383	816	10,360	17,362	27,722

The figures for principal teachers include mistresses of departments, while students in training colleges have been grouped with assistants. Some of the teachers in sole charge of small schools have had very little training, but future permanent appointments will be confined as far as possible to those who have gone through a regular course of instruction.

It will be observed that there is a fairly large number of junior teachers, or pupil teachers, as they are called in some of the States. The pupil teachers will, however, in time disappear, and their places will be filled by young people who have undergone a course of training in schools specially provided for the purpose. Allusion to the methods of training will be found in the next sub-section.

In New South Wales attention has recently been drawn to the difficulty of securing an adequate supply of teachers, particularly male teachers for small schools in out-back districts. Difficulty is also experienced in some of the States in securing suitable living accommodation for teachers of these small schools.

6. **Training Colleges.**—The development of the training systems of the various States has been alluded to at some length in earlier issues of the Year Book. The present position is as follows :—

(i) *New South Wales.* At the end of 1923 the total number of students in training was 842, of whom 312 were taking the twelve months' course for rural teachers or assistants, and the balance the various courses up to five years, and the special courses arranged in accordance with departmental requirements. Practically all accessible metropolitan schools are used as practice schools for giving training-college students opportunity to acquire practical skill in teaching. Formerly the limits of accommodation at the College were responsible for the employment in the schools of a number of untrained juniors, but during recent years teachers entering the service have at least six months' professional training. At present some difficulty is experienced owing to the necessity for holding classes in three separate buildings some distance apart, but this will disappear with the completion of the new buildings within the University grounds. The Principal of the College is also Professor of Education at the University. Members of the College staff are afforded opportunities of visiting foreign countries on study leave. In addition to the help and advice afforded by the inspectorial staff, teachers in rural districts receive the advantage of tuition by lectures and correspondence from members of the Training College staff. The Department also arranges for schools of instruction in various subjects during vacations.

(ii) *Victoria.* During recent years the educational and professional attainments of the general body of teachers in Victoria have steadily improved. Prior to the establishment of the High Schools, the pupil or junior teachers were recruited from the ranks of those who had obtained the Merit Certificate in the eighth grade of the elementary schools, and the acquirement of the necessary literary qualifications for promotion was greatly hindered by the circumstance that they were engaged in teaching for the greater portion of the day. Under present conditions, candidates spend at least two years in a High School, and consequently enter on their professional duties with a better mental and physical equipment. A number of High School pupils after serving as junior teachers for a year are awarded studentships at the Training College. The present Training College dates back to 1874, but during the retrenchment period, viz., from 1893 to 1900, it was closed. The institution was reopened on February, 1900, with an enrolment of 57 students. At the close of 1923 the students in training numbered 219, of whom 133 were women. Correspondence classes have been formed for country teachers desirous of improving their status. The students at the Hostel receive training in domestic economy. Several practising schools are attached to the Training College, and infant rooms with attached kindergartens have been specially equipped for the training of infant teachers. The University High School gives secondary teaching practice to both departmental and private students. Three courses of training are provided for at the College, i.e., for Kindergarten or infant teachers, for primary teachers, and for secondary teachers. Teachers are also greatly helped by district Conferences, and by special training at the Vacation Schools. Excellent results have been attained at the psychological laboratory attached to the Training College.

(iii) *Queensland.* The great majority of the teachers in Queensland originated in the pupil-teacher system, under which beginners, at the age of fourteen or thereabouts, were selected from the senior classes of the primary schools and placed in charge of classes, their efforts being to some extent supervised by the head teachers or senior assistants. In addition to the strain involved in teaching, the neophytes had to prepare notes of lessons, and to study for the annual examinations. During recent years, however, the juniors have been largely recruited from the secondary schools, and their more advanced physical and mental development renders them better fitted for their duties. At the end of 1923 there were 104 of these apprentice-teachers employed. Arrangements have been made to increase the number as early as possible, and in order to attract candidates of a suitable type, teacher-scholarships were granted as follows in 1923—(a) Fifteen senior scholarships (10 for males and 5 for females) to candidates who obtain the highest "approved" passes at the University Senior Examination. These scholarships entitle holders to receive free professional tuition for eighteen months at the Training College together with prescribed living allowances. At the conclusion

of their course the student teachers may be appointed assistant teachers on probation. (b) Forty junior scholarships (25 for males and 15 for females), with a currency of two and a half years, are given to candidates who have obtained approved passes at the University Junior Examination. At the end of their course these students are admitted as classified teachers in Class III. (c) Positions as student-teachers in local State schools are offered to 33 boys and 20 girls who have attended secondary schools. The period of training extends over two and a half years, during which they are trained by their respective head teachers. Living allowances are granted, and at the end of their term the students are expected to satisfy the requirements of the Class III Teachers' Examination.

At the Training College, which was opened in 1914, the activities comprise—(a) training of teacher-scholarship holders; (b) short courses of training for unclassified teachers selected from small country schools; (c) tutorial classes and correspondence tuition courses to assist students preparing for departmental examinations or for matriculation. During 1923 the number of students under training or tuition was 418, comprising 5 university students, 40 junior scholarship holders, 39 short course students, 180 teachers receiving tuition by correspondence, and 154 students receiving tuition at evening classes.

(iv) *South Australia*. In preceding Year Books a brief account was given of the scheme of training for teachers introduced in 1920. (See No. 17, p. 461). The total number of students in attendance at the Training College during 1923 was 357. Practical work in teaching is carried out at selected schools for the various types of teachers. In order to provide an adequate supply of qualified students, provision is made for the award of 150 scholarships annually, tenable at a High School. These scholarships entitle the holder to one or two years' education at a High School beyond the Junior Public stage, with an allowance of £40 per annum for boys and £30 for girls, and a boarding allowance of £20 per annum if students live away from home. Special evening or Saturday morning classes of instruction are held by the inspectors in their districts, particular attention being devoted to the interests of the rural teacher.

(v) *Western Australia*. A Training College for teachers was opened at Claremont in 1902. The original building provided accommodation for 60 students, but extensions were opened in 1908, and the number in training in 1923 was 155. Of the long-course students, 37 were in the first year, and 43 in the second year, while 9 were taking the special course for graduates and third year students. The remaining 66 were taking the one year's course for teachers of country schools. A fair proportion of the full-course students attend lectures at the University, and some remain for a third or fourth year to complete degree work. In addition to the ordinary schools at which teachers gain professional experience, special practising schools have been established for the proper training in teaching and managing the smaller country schools. The standard for entry into the teaching profession has been considerably raised during recent years. Formerly young people were taken at the age of fourteen years from the primary schools and appointed as "pupil" teachers. At present the probationary teachers or monitors must be seventeen years of age, and are expected to possess a good secondary education. After a short period of probation they enter the Training College for special professional training. University graduates receive a special course of one year's duration. Untrained applicants are appointed only when the supply of trained teachers is insufficient. The teachers in the metropolis are greatly helped by periodical conferences of inspectors and teachers, while in rural areas demonstration lessons are given by inspectors at convenient centres. Teachers in isolated areas are assisted by the correspondence classes.

(vi) *Tasmania*. During 1917 the scheme for the training of teachers was recast and grouped in four divisions:—(1) A short course to supply the professional training required for the less important positions in the primary schools and for teachers of the smaller provisional and Sixth Class schools: (2) Training of infant teachers: (3) Training for positions in the larger primary schools: (4) Training of high school teachers. Practical training for the various classes is given in well-equipped practising schools and in model small schools. The inspectors hold schools of instruction for teachers of small schools, and teachers of moderate attainments are also helped by the Correspondence School. The enrolment at the Training College in 1923 numbered 103.

7. *Expenditure.*—(i) *Maintenance.* The net expenditure on maintenance in all grades of schools, excepting technical schools, and the cost per head of average attendance, for the five years ended 1923 are shown below. The figures do not include expenditure on buildings, which is given separately in a subsequent table.

STATE SCHOOLS.—EXPENDITURE ON MAINTENANCE, 1919 TO 1923.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Nor. Ter.	Total.
TOTAL.								
1919	£ 1,971,209	£ 1,127,962	£ 773,814	£ 342,907	£ 348,694	£ 142,097	£ 2,027	£ 4,708,710
1920	2,668,060	1,325,149	1,103,041	403,768	394,931	182,822	2,763	6,080,534
1921	3,227,245	1,615,882	1,210,592	452,364	464,136	230,131	2,607	7,202,957
1922	3,234,549	1,759,692	1,186,537	444,373	521,110	239,117	2,943	7,388,321
1923	3,185,085	1,814,185	1,200,636	491,341	526,739	225,261	3,463	7,446,710

PER HEAD OF AVERAGE ATTENDANCE.

	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1919	9 5 2	6 9 10	8 3 5	5 14 10	7 19 2	5 13 4	10 19 2	7 14 4
1920	11 7 5	7 15 6	11 7 7	6 11 0	8 15 0	7 3 5	12 1 4	9 11 8
1921	12 16 9	8 19 5	11 18 1	7 1 9	10 2 11	8 16 0	10 12 11	10 15 4
1922	12 11 3	9 8 8	11 10 10	6 15 0	10 16 1	8 16 1	15 16 5	10 14 8
1923	12 7 1	9 17 9	11 9 1	7 7 4	10 17 0	8 12 0	18 18 6	10 17 4

The figures for Queensland have been amended in the last two issues by taking in expenditure in connexion with State scholarship holders at Grammar Schools and other approved secondary institutions, allowance being made for the number of these pupils in arriving at the cost per head of attendance.

As the figures show, the cost per head of average attendance has grown considerably during the quinquennium. This increase is due to the greatly enhanced cost of materials and equipment, and to the higher salaries paid to the teaching staff to meet the increased cost of living and also to make the service more attractive. For New South Wales the expenditure on salaries rose from £1,589,000 in 1919 to £2,188,000 in 1920, and to £2,666,000 in 1922. In Queensland the increase in 1920 was largely due to additional salaries and allowances—amounting to about £286,000—paid to teachers in consequence of awards of the Industrial Arbitration Court, while the further increase in 1921 was mainly accounted for by heavier cost of salaries and allowances. Increased salaries and allowances also were chiefly responsible for the high average cost in Western Australia for the year 1921 as compared with previous years.

(ii) *Buildings.* Expenditure on school buildings in each of the years quoted was as follows:—

STATE SCHOOLS.—EXPENDITURE ON BUILDINGS, 1919 TO 1923.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Nor. Ter.	Total.
	£	£	£	£	£	£	£	£
1919	265,174	87,273	94,603	41,974	24,579	23,897	650	538,150
1920	370,412	131,266	138,985	28,907	26,851	19,406	..	715,827
1921	293,420	176,099	67,490	64,885	70,533	53,059	..	725,486
1922	464,015	349,562	83,754	70,506	81,773	31,329	..	1,080,939
1923	628,592	481,372	93,760	85,024	55,173	12,751	..	1,356,672

The large increase in expenditure for New South Wales and Victoria during the last two years was due to the efforts made to overtake arrears in necessary buildings and repairs.

(iii) *Total.* The net total cost during the year 1923 was as follows :—

STATE SCHOOLS.—NET TOTAL COST, 1923.

Item.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Nor. Ter.	Total.
Net cost of education, including buildings ..	£ 3,813,677	£ 2,295,557	£ 1,294,396	£ 576,365	£ 581,912	£ 238,012	£ 3,463	£ 8,803,382

The figures in this and the preceding tables refer to all grades of State schools (with the exception of technical schools), and include evening schools. Including buildings, the net cost per scholar in average attendance for the whole of the State schools in Australia amounted in 1923 to £12 16s. 11d. as compared with £4 9s. 3d. in 1901.

8. School Savings Banks.—Returns show that these institutions are in existence in three States. In New South Wales, there were 866 banks at the end of 1923, the deposits amounting to £61,989, and withdrawals to £63,021. Since the establishment of the banks in 1887, deposits totalled £949,735, and withdrawals £933,158. Of the latter sum the withdrawals of accounts of £1 and upwards for deposit in the Government Savings Bank as children's individual accounts amounted to £178,711. In South Australia, 694 schools had 41,401 depositors, with £55,747 to their credit; and in Western Australia, there were 588 school banks, with 42,025 depositors and £71,505 to their credit.

§ 3. Private Schools.*

1. Returns for 1923.—The following table shows the number of private schools, together with the teachers engaged therein, and the enrolment and average attendance in 1923 :—

PRIVATE SCHOOLS, 1923.

State.	Schools.	Teachers.	Enrolment.	Average Attendance.
New South Wales	681	4,181	80,723	66,450
Victoria	486	2,154	63,105	(a) 53,000
Queensland	179	1,120	28,576	22,510
South Australia	170	802	16,069	12,130
Western Australia	119	501	11,224	10,056
Tasmania	77	370	7,137	5,263
Northern Territory	1	3	76	57
Total	1,713	9,131	206,910	169,466

(a) Estimated.

The totals for New South Wales include returns from the Sydney Grammar School, which receives a yearly State subsidy of £1,500, and which, in 1923, had an enrolment of 537, and an average attendance of 491.

The figures for Queensland include the returns from Grammar Schools, of which there are ten—six for boys and four for girls, with an enrolment of 1,204 boys and 752 girls. These schools are governed by boards of trustees, partly nominated by Government, and partly by the subscribers to the funds. The trustees make regulations regarding the fees of scholars, the salaries of teachers, and generally for the management of the schools. The total Government aid received in 1923 amounted to £17,800. In addition, a sum of £14,837 was received for Government scholarships and bursars' fees. The Grammar Schools are inspected annually by officers of the Department of Public Instruction.

* Private schools include all schools not wholly under State control. The term "private," though popularly applied, is of course a misnomer.

2. Growth of Private Schools.—The enrolment and average attendance at Private Schools during 1891, 1901, 1911, and in each year of the period 1919 to 1923 are as follows :—

PRIVATE SCHOOLS.—ENROLMENT AND ATTENDANCE, 1891 TO 1923.

Year.	Enrolment.	Average Attendance.	Year.	Enrolment.	Average Attendance.
1891	124,485	99,588	1920	192,093	156,083
1901	148,659	120,742	1921	198,688	164,073
1911	160,794	132,588	1922	201,574	167,362
1919	193,115	145,630	1923	206,910	169,466

The comparatively small rate of increase in private school enrolment and attendance is due in large measure to the development of the State educational systems, especially as regards the provision of secondary education.

In 1923 the percentage of attendance on enrolment was 81.9, as compared with 75.4 in 1919, when the attendance suffered on account of the influenza epidemic.

3. Registration of Private Schools.—Until recent years the various State Governments had comparatively little control over privately conducted schools. With the advance of modern educational thought the position is improving, but still leaves much to be desired. It is evident that without a thorough system of registration there will always be a difficulty in regard to enforcing the compulsory clauses of the various Education Acts. Moreover, advanced educational thought demands complete supervision, not only of curricula, but of all matters pertaining to school hygiene.

In New South Wales, under the provisions of the Bursary Endowment Act of 1912, non-State Schools are inspected by the departmental Inspector of Secondary Education for registration or renewal thereof. Under the compulsory clauses of the amending Public Instruction Act of 1916, children between the ages of 7 and 14 years must attend schools certified as efficient by the Minister. Provisional registration is granted to applicants pending inspection by Government officers. School proprietors must conform to prescribed conditions in regard to the hygiene, etc., of their buildings, and supply the requisite returns.

In Victoria, a registration scheme has been established under a special committee consisting of nine members of the Council of Education, and all private schools must be registered. The Minister of Education is also empowered to authorize the inspection of any school (other than a State School) in order to ascertain whether the instruction given is satisfactory. The inspector of registered schools has pointed out that the Registration Act has had the effect of improving the school buildings as well as the methods of instruction. Since 1914, the improvement of existing buildings has been enforced where necessary, while full requirements have been insisted on in the case of additions or new buildings.

In Queensland, with the exception of the Grammar Schools, which are now examined annually, there is practically no control over the private schools, beyond the fact that they may submit themselves to inspection if so desired. No provision is made under the Education Act for the furnishing of returns.

In South Australia there is no compulsory registration of schools or teachers, but all instruction must be given in the English language, and monthly and annual returns of attendance forwarded to the Department of Education.

In Western Australia, non-Government schools must be declared efficient by the Education Department if attendance at them is to be recognized as fulfilling the requirements of the law, and the school registers must be open to the inspection of the compulsory officers of the Department. Returns of attendance must be furnished monthly and quarterly.

In Tasmania, all private schools must be registered with the Teachers and Schools Registration Board. Prior to registration by the Board teachers must produce evidence of fitness to teach. Annual returns of attendance are required.

§ 4. Free Kindergartens.

The following information regarding Free Kindergartens has been compiled from particulars supplied by the principals of the chief institutions or the organizing secretary in each State, except in the case of Western Australia, the details for which were furnished by the Education Department.

FREE KINDERGARTENS, 1923.

State.	No. of Schools.	Average Attendance.	Permanent Instructors.	Student Teachers.	Voluntary Assistants.
New South Wales (Sydney)	15	688	29	36	25
Victoria (Melbourne) ..	25	1,430	64	28	407
(Ballarat) ..	1	22	2	..	8
Queensland (Brisbane) ..	6	..	7	16	9
South Australia (Adelaide)	7	205	7	20	..
Western Australia (Perth)	5	176	8	23	5
Tasmania (Hobart) ..	4	142	6	13	..
(Launceston) ..	2	89	3	3	5
Total	65	2,752	126	139	459

In New South Wales there were 73 students at the Kindergarten Training College. At the Melbourne College, 28 students were in training. The Brisbane Training College had 16 students in training during 1924, the Training College at Adelaide 20, and at Perth 23. There is no training college at Hobart, but the free kindergartens are used as practising schools in connexion with the Kindergarten Association. Three students were in training during 1924.

The information given above refers to institutions under private kindergarten unions or associations, and is exclusive of the kindergarten branches in the Government schools of the various States.

§ 5. Universities.

1. *Origin and Development.*—(i) *University of Sydney.* The Act of Incorporation of the University of Sydney received Royal Assent on the 1st October, 1850, and the first Senate was appointed on the 24th December of that year. The first matriculation examination was held in October, 1852, when 24 candidates passed the required test, and the formal inauguration ceremony took place on the 11th October of the same year. A Royal Charter was granted to the University on the 27th February, 1858. Women students were admitted in 1881. The passing of the University (Amendment) Act of 1912 marks an important epoch in the development of the educational system of New South Wales. The Act aims at placing the University in a more effective position as the culminating point in a thoroughly co-ordinated system of State education, and it is claimed that the passing of this measure made the educational system—from the Primary Schools through the Secondary Schools to the Technical Colleges or to the University—form a progressive and continuous whole. More extended reference to this Act and to the liberal scheme of exhibitions provided thereunder for scholars from the State and Private Schools was given in Official Year Book No. 15, page 745. At the inception of the University there were only three professorships. The present staff consists of 32 professors, 5 associate and 5 assistant professors, and 164 lecturers and demonstrators. There are, in addition, 19 honorary lecturers.

(ii) *University of Melbourne.* This institution was established by Act of Parliament assented to on the 22nd January, 1853, and its first council was appointed on the 11th April of that year. The foundation stone of the main building was laid on the 3rd July, 1854, and the University was formally inaugurated on the 13th April, 1855. By Royal Letters Patent, issued in 1859, its degrees are, like those of the Sydney institution, declared of equal status with those of any other University in the British Empire. Women

students were admitted to degree courses for the first time in 1880. The University, which began in 1855 with schools of Arts and Law, has now a staff of 19 professors, 5 associate professors, 127 lecturers and demonstrators, and 107 various assistants. The Conservatorium of Music has a staff numbering 44.

(iii) *University of Queensland.* The Act to establish the University of Queensland was passed in 1909, and the first Senate was appointed on the 14th April, 1910. The University was opened on the 14th March, 1911, when 60 students were matriculated. Provision has been made for a Correspondence Study department in connexion with the institution, and at the request of the Brisbane branch of the Workers' Educational Association weekly lectures are given in History and Economics. At the present time there are 11 professors, with 16 independent lecturers, 8 assistant lecturers and demonstrators, and 1 miscellaneous assistant.

(iv) *University of Adelaide.* This University was established by Act of Parliament in 1874. Its origin and progress were largely due to the munificence of the late Sir Walter Watson Hughes and Sir Thomas Elder, G.C.M.G., the total gifts of the latter amounting to over £100,000. The academical work of the institution was commenced in March, 1876, when eight matriculated and fifty-two non-graduating students attended lectures. The foundation stone of the University buildings was laid on the 30th July, 1879, and the buildings were opened in April, 1882. In 1881, by Royal Letters Patent, the degrees granted by the institution were recognized as of equal distinction with those of any University in the British Empire. The Elder Conservatorium of Music was opened in 1898. Power was given by Act of Parliament in 1880 to grant degrees to women. At first there were only four professorships in the University, whereas the present staff consists of 16 professors, 90 lecturers and demonstrators, and 51 miscellaneous assistants, while the staff at the Conservatorium, not included in the foregoing figures, numbers 17.

(v) *University of Western Australia.* The University of Western Australia was established under an Act which received Royal assent on the 16th February, 1911, and the first Senate was appointed on the 13th February, 1912. The University was opened in March, 1913. There are now 10 professors, in addition to 31 lecturers and demonstrators and 20 miscellaneous assistants. The Chair of Agriculture was endowed by Sir Winthrop Hackett. Associates of the Perth Technical School or the Kalgoorlie School of Mines may, under prescribed conditions, obtain a reduction in period of attendance for the B.E. degree, and students from the School of Mines may be admitted to the examinations and take portion of their course at the University.

(vi) *University of Tasmania.* The Act to establish the University of Tasmania (Hobart) was assented to on the 5th of December, 1889. At the present time the institution, which is small but efficient, possesses a staff of 7 professors, 13 independent lecturers, and 6 assistant lecturers and demonstrators. Under Statutes the Zeehan School of Mines and Metallurgy and the School of Mines and Industries at Mount Lyell were affiliated to the University.

2. Teachers and Students.—The following table shows the number of professors and lecturers, and the students in attendance at each of the State Universities during the year 1923 :—

UNIVERSITIES.—TEACHERS AND STUDENTS, 1923.

University.	Professors.	Lecturers and Demon- strators.	Students attending Lectures.		
			Matriculated.	Non- matriculated.	Total.
Sydney	42	183	2,337	448	2,785
Melbourne	24	143	..	..	2,284(a)
Queensland (Brisbane)	11	16	275	112	387
Adelaide	16	90	743	616	1,359(b)
Western Australia (Perth)	10	31	350	3	353
Tasmania (Hobart)	7	19	135	32	167

(a) Exclusive of 200 music students.

(b) Exclusive of 551 music students.

Students at the Conservatorium of Music have been excluded in the case of Melbourne and Adelaide. The Conservatorium in Sydney, while attached to the Education Department, is not under the control of the University.

3. University Revenue.—The income of the Universities from all sources during the year 1923 was as follows :—

UNIVERSITIES.—REVENUE, 1923.

University.	Government Grants.	Fees.	Private Foundations.	Other.	Total.
	£	£	£	£	£
Sydney	118,770	44,563	63,869	4,963	232,165
Melbourne	62,537	104,996	9,185	7,381	184,099
Queensland (Brisbane) ..	21,225	7,775	14,983	1,709	45,692
Adelaide	35,660	22,327	22,817	11,166	91,970
Western Australia (Perth)	17,100	3,583	22,269	3,000	45,972
Tasmania (Hobart) ..	12,972	2,294	1,402	175	16,843
Total	268,264	185,538	134,525	28,414	616,741

The extent to which the older-established Universities have benefited by private munificence will be apparent from the following table :—

UNIVERSITIES.—BENEFACTIONS.

University of Sydney.		University of Melbourne.		University of Adelaide.	
Donor.	Amount.	Donor.	Amount.	Donor.	Amount.
	£		£		£
J. H. Challis ..	276,750	Sir Samuel Gillott ..	34,400	Sir Thos. Elder ..	98,760
Sir P. N. Russell ..	100,000	Sir Samuel Wilson ..	30,000	The Hon. Sir Lang-	
Thos. Fisher ..	30,000	James Stewart ..	25,624	don Bonython ..	40,000
Miss Elizabeth Caird	9,576	Hon. Francis Ormond	20,000	Mrs. Jane Marks	30,000
Sir Hugh Dixson ..	9,050	John Hastie ..	19,140	R. Barr Smith	
Edwin Dalton ..	8,000	Robert Dixon ..	10,837	and family ..	21,150
J. F. Archibald ..	7,135	Sir J. M. and Lady		Sir W. Hughes ..	20,000
Hon. Sir W. Macleay	6,221	Higgins ..	9,700	Family of John	
Mrs. Hovell ..	6,000	John Dixon Wyse-		Darling ..	15,000
Thos. Walker ..	6,200	laskie ..	8,400	Mrs. G. A. Jury	12,000
Mrs. M. H. Dalley ..	5,000	Mrs. E. R. Moran ..	7,000	Hon. J. H. Angas	10,000
Other donations ..	65,110	David Kay ..	5,764	Other donations	31,830
		Cuming Smith & Co.			
		Ltd. ..	5,250		
		Subscribers, Ormond	5,217		
		Exhibitions in Music			
		Mr. and Mrs. F. Knight	5,000		
		Henry T. Dwight ..	5,000		
		Wm. Thos. Mollison ..	5,000		
		Other donations ..	96,478		
Total	529,042	Total	292,810	Total	278,740

The figures quoted above for the Sydney University relate to actual cash, and are exclusive of the munificent bequest by the late Hon. Sir Samuel McCaughey, M.L.C., of property producing an annual income of £19,000 to be applied to the general purposes of the University. In addition to the sum of £6,000 shown above, the Hon. Sir W. Macleay also presented the Museum of Natural History to the University of Sydney. The column "Other Donations" for Melbourne University includes portion of the sum of £49,000 raised by special appeal in 1920.

The credit balances of some of the above endowments now amount to very considerable sums. For example, on the 31st December, 1923, the Challis Fund amounted to nearly £335,000, while in the case of Melbourne University the Stewart fund on the 31st December, 1923, stood at £30,800, the Hastie at £26,400, and the Dixson fund at £16,400.

In addition to the above there were various other bequests to Sydney University—*e.g.*, collection of Egyptian antiquities, etc., by Sir Charles Nicholson, and Natural History collection by Mr. Geo. Masters, while the building for the Natural History Museum was given by Sir W. Macleay. Numerous prizes and scholarships have also been given to the various colleges. In Melbourne, the Hon. Francis Ormond's benefactions to Ormond College amounted to about £108,000. Private benefactions to the University of Queensland amounted in 1923 to £76,000, of which £33,800 was received from the trustees of the late Sir Samuel McCaughey and £8,000 from the Walter and Eliza Hall Trust. A gift of £10,000 was received from the British Red Cross Association in 1920, and a similar sum was presented in 1923 by Miss Kate Garrick. With a view to advancing the cause of education in agriculture, forestry and allied subjects, Mr. Peter Waite transferred to the Adelaide University in 1914 the whole of the valuable Urrbrae estate at Glen Osmond. The estate comprises 134 acres of land with a fine mansion. In 1915, he presented the estate of Claremont and part of Netherby, comprising 165 acres, adjoining Urrbrae, while in 1918 he transferred to the University 5,880 shares in a public company to provide funds to enable the University to utilize the land for the purposes intended. In addition to the sum of £30,000 mentioned above, presented by Mrs. Jane Marks in 1922, Adelaide University benefited during the year by a gift of property valued at £20,000, presented by Mrs. A. M. Simpson and Miss A. F. Keith Sheridan. In Western Australia the chair of Agriculture was founded by an endowment of Sir Winthrop Hackett, first Chancellor of the University, and a sum of £19,450 was received from this endowment in 1923. Private benefactions to the University of Tasmania amount to about £6,800.

4. **University Expenditure.**—For the year 1923 the expenditure by the Universities under various headings was as follows:—

UNIVERSITIES.—EXPENDITURE, 1923.

University.	Salaries and Administration.	Scholarships, Bursaries, etc.	General Maintenance.	Buildings and Grounds.	Other.	Total.
	£	£	£	£	£	£
Sydney	120,836	13,074	30,736	63,976	606	229,228
Melbourne	107,667	8,798	7,316	8,835	22,472(a)	155,088
Queensland (Brisbane) ..	22,219	3,171	7,544	288	7,268(b)	40,490
Adelaide	47,289	1,240	4,657	8,784	5,545(c)	67,515
Western Australia (Perth)	17,722	208	5,858	..	1,922(d)	25,710
Tasmania (Hobart) ..	11,024	785	892	..	4,205	16,906
Total	326,757	27,276	57,003	81,883	42,018	534,937

(a) Includes £9,896 laboratory and research expenditure.

(b) Includes £2,434 laboratory and research.

(c) Includes £2,476 laboratory and research.

(d) Laboratory and research.

5. **University Extension.**—Extension lectures were instituted at Sydney University in 1886, and in 1892 a Board was appointed which receives and considers applications from country centres, and makes provision for engaging lecturers and managing the entire business connected with the various courses. The Board also arranges for courses of lectures in other States. In 1923 provision was made for 23 courses, the lectures being given in part at the University, and in part in various suburban and country districts.

Evening tutorial classes open to both matriculated and unmatriculated students have been established in various centres in accordance with the University Amendment Act of 1912. Fifty-five of these classes, attended by about 1,700 students, were in operation during 1923. Twenty-nine of the classes were held in the metropolitan area, and 26 in country districts.

University extension lectures in Victoria date from the year 1891, when a Board was appointed by the Melbourne University for the purpose of appointing lecturers and holding classes and examinations at such places and in such subjects as it might think fit. A joint committee composed of representatives from the Extension Board and the Workers' Educational Association respectively controls the organization of tutorial classes. The Board also arranges for advising country students by correspondence on social and cultural subjects. About 70 extension lectures were given in Melbourne and in country districts in 1923. The tutorial classes during the year numbered 22, of which 15 were held in Melbourne and suburbs, and 7 in country towns, the combined attendance reaching 600. In addition, about 300 students were receiving tuition by correspondence. A Vacation School was in operation from 26th May to 6th June, and was attended by 1,200 students, a large proportion of whom were teachers.

As pointed out previously, a correspondence study department has been inaugurated in connexion with the University of Queensland in order to overcome, as far as possible, the difficulties of students who desire to benefit by University teaching, but who for various reasons are unable to attend the lectures. In 1923 there were 144 students on the roll. In addition, 7 public lectures, and 3 intra-mural courses were given in Brisbane, and 8 lectures in country towns, while 10 classes were conducted in Brisbane and 9 in the country for members of the Workers' Educational Association, and attended by 281 and 176 students respectively, and correspondence lectures were provided for 606 country students. Four extension classes in country towns were provided with notes and text-books, and a tutor was appointed to supervise the work.

The Adelaide University has also instituted short courses of extension lectures in Arts and Science, to which students are admitted on payment of a nominal fee. Public intimation of these lectures is made from time to time during the session. Four courses of lectures were delivered in 1923. Attendance at tutorial classes in 1923 amounted to 433. In addition, short courses of popular lectures, study circles, and tutorial classes were conducted at various local centres.

In Western Australia provision has been made for the giving of courses of extension lectures in Perth and suburbs, and also—by arrangement with local committees—in country centres. The professor of agriculture visits the chief farming districts for the purpose of giving lectures to, and holding conferences with the primary producers. Special short courses for farmers are given at the University. Short courses of popular lectures are also given in the evening by various professors at the University.

In Tasmania during 1919 the University Extension Board which had previously controlled the work of providing extra-mural tuition was replaced by the Committee for Tutorial Classes. The Professor of Economics is director of tutorial classes, and conducts one class annually. There are also lectureships for the northern and west coast districts. Attendance at the classes in 1923 numbered 304.

6. Workers' Educational Association.—In 1913 Workers' Educational Associations were formed in all the States of Australia, and later in New Zealand. The movement has for its object the bringing of the University into closer relationship with the masses of the people, and thereby providing for the higher education of the workers in civic and cultural subjects. The work of the Association is gaining in popularity year by year, and the growth of the movement has been phenomenal. The Government of New South Wales at first granted the University of Sydney the sum of £1,000 to initiate a scheme for tutorial classes. There are now direct grants from all State Governments except Western Australia, and an additional University grant in New Zealand. The particulars of grants for classes are as follow:—New South Wales, £5,970, 58 classes, Victoria, £4,500, 21 tutorial classes and extension work; Tasmania, £1,380, 14 classes; South Australia, £2,550, 19 classes; Queensland, £3,000, 11 classes and 23 study circles. In addition, the New South Wales Association receives a Government grant for general organizing purposes of £400, paid on the basis of £1 for £1 on subscriptions and donations up to this amount. Correspondence courses form a strong feature of the work in Queensland, groups of construction workers and other outback pioneers being reached thereby. About 55 per cent. of the total membership in Queensland consists of correspondence students. The total number of students throughout Australia is approximately 4,000, the greater number of whom are taking three-year courses while

working at their daily occupations. An analysis of these occupations showed that the great majority of the students were wage-earners. The principal subjects chosen in all States are Industrial History, Economics, Political Science, and Sociology, but there is an increasing number of classes in other subjects such as History, Psychology, Philosophy, Literature, Music, Physiology, and Biology. Each University co-operates with the W.E.A. in the formation of a joint committee which appoints tutors and generally supervises the work with the assistance of a University officer with the title of Director of Tutorial Classes. In addition to the longer and more serious courses, a great many preparatory classes, study circles, and summer schools are organized by the Association, numerous courses of public lectures are delivered, educational conferences promoted, and an extensive book service is spreading educational literature throughout Australia. A strong feature of the work of the Association is the organization of a number of country branches to carry facilities for higher education to districts in which these have hitherto been lacking. This work has been particularly successful in New South Wales, Victoria, Queensland, and Tasmania. In New South Wales the Association organized an important representative conference on "Trade Unionism in Australia" in 1915, the report of which has been issued in book form. Another conference on the "Teaching of Sex Hygiene" was held in 1916, the report of which has passed through two large editions. A report was also published of a conference on "Adolescent Education" held in 1919. During 1923 eight conferences were held in the principal centres of Victoria on the subject of "Adult Education," the attendances totalling 1,400. A Commonwealth Conference held at Adelaide in 1918 resulted in the formation of a federal organization now known as "The Workers' Educational Association of Australia." Its central office is in the Education Department, Melbourne. The Federal Council co-ordinates the activities of the W.E.A. in all States, and has inaugurated a series of publications on sociological and economic subjects. It also publishes "The Highway," a monthly magazine now in its sixth year, which contains notes on the movement and general discussions on educational work.

§ 6. Technical Education.

1. **General.**—Although provision has been made in some of the States in respect to many necessary forms of technical education, the total provision made would imply that this branch of education has not been regarded as of great importance. As will be seen later on, the expenditure on technical education for the whole of Australia is comparatively small.

2. **New South Wales.**—Some account of the origin and development of technical education in New South Wales was given in Official Year Book No. 15, page 750, but considerations of space preclude its repetition in this issue. It may be noted, however, that technical education had its origin in this State in 1883, but it was not until the year 1913 that a definitely co-ordinated scheme was adopted. The branch Technical Colleges, with the exception of those at Newcastle and Broken Hill, were then superseded by Trade Schools, admission to which was restricted to those actively engaged in the trade concerned, and was dependent also on the possession of a certain degree of preparatory knowledge. Courses of instruction in which workshop experience is not necessary to train the efficient worker—such as Art, Science, and Commercial Courses—are, however, open to all students who have the requisite preliminary knowledge. Advisory committees were appointed for each trade or group of trades. The first two or three years' course of instruction is given in the Trade Schools, of which there are ten, and students may then go on for a further two or three years' advanced teaching at the Technical Colleges, of which there are three, one at Sydney, one at Newcastle, and one at Broken Hill. The higher courses embrace instruction in advanced trades' work qualifying for the position of manager or foreman, but no attempt is made to train for the professional standing. It is hoped, however, that the scheme will develop so that part of the graduates may proceed to the University. Admission to the higher courses will eventually be restricted to those who have either graduated in the Trade Schools of the Department, or who evidence possession of a similar standard of knowledge. In addition to the courses given in the Technical Colleges and Trade Schools, elementary instruction has been provided at various centres where there has been a demand for it, and provision has been made also for special courses of instruction by correspondence. A liberal scheme of scholarships

has been provided for students passing from the day or evening Junior Technical Schools or Domestic Science Schools, to the Trades and Science Schools, as well as scholarships to the University at the close of the diploma course.

During the year 1923 lower and higher courses of instruction were given at the usual centres. In addition, elementary technical education was provided at a number of smaller centres in such subjects as dress-making, millinery, cookery, wool-classing, coal-mining, and mine-surveying.

The table below gives some idea of the development of technical education in New South Wales during the five years 1919 to 1923 :—

TECHNICAL EDUCATION.—NEW SOUTH WALES, 1919 TO 1923.

Year.	Number of Classes.	Number of Enrolments.	Individual Students.	Number of Lecturers and Teachers.	Fees Received.
					£
1919	557	14,580	7,827	379	9,416
1920	638	18,119	9,258	406	12,701
1921	636	18,974	9,696	447	12,641
1922	646	21,328	9,806	470	13,627
1923	664	23,496	10,234	478	14,880

Attention has recently been drawn to the necessity for a Vocational Bureau to make provision for effectively placing in the various industries boys and girls leaving school. At present many of the students at the Technical Colleges are anxious to be apprenticed, but there is a difficulty in bringing the interested parties together.

3. **Victoria.**—Technical instruction in mining has for many years received considerable attention in Victoria, the Ballarat School of Mines, which was established as far back as 1870, having achieved an Australasian reputation. Fine work was also done at the School of Mines in Bendigo, and later on excellent courses of training were evolved at the Working Men's College in Melbourne. The general scheme of instruction, however, lacked cohesion, and it was not until after the publication of the Report of the Royal Commission on Technical Education, which was appointed in 1899, that many defects were remedied. Prior to 1910 the whole of the schools were under the control of local councils, but in the year mentioned the control passed to the Education Department. At the end of 1923 there were 27 Technical Schools receiving State aid. The largest technical institution in Melbourne is the Working Men's College, founded in 1887. The College, in addition to giving instruction in a large number of technical subjects, is also a School of Mines. During 1923 the classes in operation numbered 180, and the average enrolments per term amounted to 2,400. Such institutions as the Swinburne Technical College, and the Ballarat and Bendigo Schools of Mines, have also an extensive curriculum embracing the more important industrial subjects. Special attention has been given in recent years to the provision of technical education for girls. There are, moreover, 23 Junior Technical Schools in existence, giving a two or three years' course of instruction to boys between the ages of 12½ and 15 years, thereby preparing them for the more advanced teaching in the higher schools.

Particulars regarding the growth of technical education in Victoria during the last five years are given in the appended table :—

TECHNICAL EDUCATION.—VICTORIA, 1919 TO 1923.

Year.	Number of Classes.	Number of Enrolments.	Average Attendance.	Fees Received.
				£
1919	110	12,785	9,102	18,351
1920	115	14,174	10,548	29,132
1921	116	15,105	10,663	25,831
1922	120	16,168	12,236	28,725
1923	125	17,679	12,804	32,286

Considerably more than 2,000 returned soldiers have received the advantages of vocational training, and the staff and councils of the various technical schools have taken great interest in the work of teaching and finding employment for qualified trainees.

4. **Queensland.**—Up to the passing of the "Technical Instruction Act of 1908," technical education in Queensland was controlled by local committees, the State simply providing financial aid. Under the provisions of this Act, the State took over the technical colleges at Brisbane, South Brisbane and West End, and formed therefrom a Central Technical College. By an amending Act in 1918, power was taken to assume the control of other technical institutions, and in 1919 the colleges at Toowoomba and Rockhampton came under departmental control. In 1923 the Colleges at Cairns, Townsville, and Bowen were taken over. Technical High Schools were inaugurated in 1921 at the Central and Ipswich Technical Colleges, and the vocational courses given in the High Schools connected with the Colleges at Toowoomba and Rockhampton attracted a large number of students. The Department's policy of combining Technical Colleges with High Schools in the country centres has proved very successful. During 1923 there were seventeen technical colleges in operation, while classes in technical subjects were held in a number of smaller centres. Twelve colleges were directly controlled by the Department and five by local committees. Preparatory Day Trade Schools were established at Ipswich and Brisbane in 1916, and Domestic Science Day Schools at Brisbane and Ipswich in 1915, and at Townsville in 1918. A certain amount of technical and vocational work is also provided for at the Rural Schools. (See § 2, 4 (v.c.)). Several itinerant Domestic Schools have been opened to meet the needs of districts where the population is not sufficient to warrant the establishment of permanent classes, and these institutions have been very successful. Since the inauguration of the scheme, the specially-fitted railway cars have travelled 3,998 miles, thirteen centres have been visited, and the courses of instruction have been attended by 277 students. Vocational training for returned soldiers was provided in Brisbane and at various country centres. The special classes at the Central Technical College were closed at the end of 1922, and the trainees remaining were placed in suitable positions. The progress of technical education since 1919 is shown in the following table:—

TECHNICAL EDUCATION.—QUEENSLAND, 1919 TO 1923.

Year.	Number of Classes.	Enrolments.	Average Weekly Attendance.	Number of Teachers.	Fees Received.
					£
1919	423	9,864	(a) 8,000	348	11,364
1920	509	11,863	(a) 9,000	377	13,074
1921	522	11,993	(a) 9,500	372	13,882
1922	512	12,069	(a) 10,000	396	14,549
1923	607	11,565	(a) 10,000	387	13,220

(a) Estimated.

Greater attention is being devoted to the development of trade classes, and the Technical College authorities have been assisted by the University professors in the preparation of a properly organized system of trade instruction. Compulsory attendance at technical classes in various districts has been provided for by industrial awards, the decisions so far—with the exception of printing—being confined to trades connected with engineering and metal working. Under the scheme inaugurated in 1920, there is a Central Apprenticeship Committee and Group Apprenticeship Committees, which exercise oversight over apprenticeship matters and submit recommendations as to conditions to the Arbitration Court. Although some opposition was met with at the outset, there is an increasing tendency amongst employers to obtain apprentices by application to the Secretary.

5. **South Australia.**—Prior to the year 1917 the condition of affairs in regard to technical education in Australia was regarded by the Education Department as unsatisfactory. There was a School of Mines and Industries in Adelaide, and in addition Schools of Mines at Moonta, Port Pirie, Kapunda, Mount Gambier, and Gawler. While the Government bore the bulk of the cost of maintenance of these institutions, they were controlled by independent councils, and there was no regular co-ordination in regard to staffs, curriculum, etc. A Director of Technical Education was appointed in 1916, and the reorganization of the system was thereupon undertaken. The position in 1921 was, however, still unsatisfactory, as the control of technical education in the State rested with two bodies, (a) the Council of the South Australian School of Mines and Industries, whose activities are confined to the metropolitan area; and (b) the technical branch of the Education Department, which deals with schools in the metropolis, as well as throughout the country districts. During that year, an amending Act dealing with the technical education of apprentices was passed, and, by proclamation, the scope of the original Act was widened so as to include over 150 separate trades. Regular meetings of the Apprentices Advisory Board were held, and improvements in conditions of apprenticeship were made on their recommendation. In 1923 the work of the 7 classes established under the Act was carried on; 519 apprentices and probationers were enrolled, and 124 apprentices completed the statutory three years' course of study and received tradesman's certificates. The Country Technical Schools previously alluded to were maintained in 1923, as also the new schools opened in 1922 at Kadina and Wallaroo.

Particulars regarding the position of technical education in the State during the five years 1919 to 1923 are given hereunder:—

TECHNICAL EDUCATION.—SOUTH AUSTRALIA, 1919 TO 1923.

Year.	Number of Classes.	Enrolments.	Average Attendance.	Number of Teachers.	Fees Received.
					£
1919	207	6,819	4,453	134	4,177
1920	358	11,304	8,424	200	5,161
1921	357	10,499	7,187	183	5,713
1922	311	10,609	7,875	160	6,008
1923	332	11,339	8,834	175	6,309

6. **Western Australia.**—A Technical School was established at Perth in 1900, and since its opening has progressed rapidly. During the third term of 1923 there were about 2,000 individual students receiving instruction at this institution. The school is affiliated to the University, and provides instruction for evening students in first year University work in mathematics, physics, and chemistry, and second year work in mathematics and chemistry. The trade classes are well supported, and particular attention is devoted to subjects of value to the skilled tradesman. Committees, including representatives of employers and workers' unions, have been formed for each group of trades, and confer regularly with the trade instructors. Full time day classes in engineering are provided for pupils who have passed through the Junior Technical School, and a number of railway apprentices attend the day classes at Perth and Midland Junction. The Fremantle School, which had 544 students on the roll at the end of 1923, is being gradually developed on the trade side. In the other centres the classes are chiefly confined to commercial and domestic subjects. In addition, Continuation Classes are held at various centres. The schools are all under the control of the Education Department, the officer entrusted with the supervision being styled Director of Technical Education.

At present pupils leaving the State Schools at the age of fourteen to take up employment may by attendance at evening classes qualify for free admission to the Technical Schools. Those with leaving certificates from the eighth standard, and others able to devote their full time to study, may obtain day instruction at the Technical Schools in subjects bearing on their intended occupations, or may qualify for a more extended course including graduation at the University. Returns for the last five years are embodied in the table hereunder :—

TECHNICAL EDUCATION.—WESTERN AUSTRALIA, 1919 TO 1923.

Year.	Number of Classes.	Enrolments.	Average Attendance.	Number of Teachers.	Fees Received.
					£
1919	463	5,713	(a)3,337	130	842
1920	455	5,424	(a)3,158	151	976
1921	461	6,773	(a)3,466	145	1,920
1922	449	6,920	(b)5,679	153	3,139
1923	446	6,850	(c)5,552	146	2,988

(a) Individual students.

(b) 3,471 individual students.

(c) 3,409 individual students.

7. Tasmania.—Provision for technical education dates from the year 1888, but in the report of the Commission appointed in 1916 to inquire into the condition of technical education in Tasmania, allusion was made to the want of co-ordination between existing institutions and the Education Department, and it was recommended that the schools should be taken over by the Government, and a trained technologist appointed as organizing inspector. The inspector was appointed in 1917 and a Technical Education Branch was established in 1918. The scheme of technical education includes provision for courses of training in industrial, commercial, and domestic pursuits. Under the first-mentioned, the scheme provides for junior technical schools, applied science schools, technical trade schools, and art and applied art schools, and it is to this group that the activities of the Department have hitherto been almost exclusively confined. The co-operation of employers and employees has been obtained, and certain of the more advanced courses have been co-ordinated with the courses given at the University. There are Junior Technical Schools for boys at Hobart and Launceston, and for boys and girls at Queens-town and Zeehan. Senior Technical Schools are in operation at Hobart and Launceston organized into Departments of Engineering and Applied Science, Art, and Trade; and at Queenstown and Zeehan, courses in Metallurgical and Mining Engineering are undertaken.

TECHNICAL EDUCATION.—TASMANIA, 1919 TO 1923.

Year.	Number of Classes.	Enrolments.	Average Weekly Attendance.	Number of Teachers.	Fees Received.
					£
1919	107	752	478	56	784
1920	135	1,152	784	63	1,338
1921	167	1,218	860	65	1,286
1922	209	1,098	(a)	55	1,069
1923	254	1,151	(a)	72	1,133

(a) No record.

8. **Expenditure on Technical Education.**—The expenditure on technical education in each State during the period 1919 to 1923 is shown below :—

TECHNICAL EDUCATION.—EXPENDITURE, 1919 TO 1923.

Year.		N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Total.
		£	£	£	£	£	£	£
1919	(a)	115,087	115,383	44,285	26,580	14,047	10,335	325,717
	(b)	6,302	8,083	10,180	3,586	569	..	28,720
1920	(a)	211,987	118,168	57,219	34,538	16,326	13,677	451,915
	(b)	2,668	9,326	22,607	13,080	494	328	48,503
1921	(a)	210,515	162,596	62,321	40,864	19,212	17,808	513,316
	(b)	13,972	29,619	4,854	4,172	580	259	53,456
1922	(a)	169,925	202,228	59,075	43,744	18,406	18,222	511,600
	(b)	48,978	21,750	1,577	708	1,030	151	74,194
1923	(a)	152,665	215,320	60,824	46,655	18,189	18,271	511,924
	(b)	16,971	45,649	13,379	3,461	1,590	366	81,416

(a) Maintenance.

(b) Buildings.

Cost of maintenance in New South Wales during 1923 shows a decrease of £58,000 on the figures for 1921, the falling-off being due to the disappearing expenditure on vocational training of soldiers and sailors which dropped from £58,600 in 1921 to £415 in 1923.

The expenditure on maintenance for technical education in 1923 amounted to 1s. 10d. per head of the population of Australia, as compared with 26s. 2d. per head expended on maintenance for primary education, the figures apparently showing that technical education has not attained its proper place in educational organization.

§ 7. Business Colleges and Shorthand Schools.

There has been considerable development in recent years both in the number and scope of privately conducted institutions which aim at giving instruction in business methods, shorthand, typewriting, the use of calculating machines, etc. Particulars for all States excepting Queensland are given in the following table :—

BUSINESS COLLEGES, SHORTHAND SCHOOLS, ETC., 1923.

State.	Schools.	Teachers.	Students Enrolled.		Average Attendances.		Fees Received.
			Males.	Females.	Males.	Females.	
New South Wales ..	19	146	2,654	4,867	797	2,230	£ 45,273
Victoria ..	16	173	3,903	2,591	2,902	2,041	(b)
Queensland(a) ..	..	..	..	..	..	..	..
South Australia ..	6	43	795	960	632	639	14,039
Western Australia	11	44	851	811	(b)	(b)	15,908
Tasmania ..	3	11	143	562	54	168	4,525

(a) Included in private schools.

(b) Not available.

The figures for New South Wales are exclusive of students instructed at home through the medium of correspondence classes.

In Victoria it is explained that the preponderance of male students is due to the larger enrolment of males in the correspondence classes.

§ 8. Diffusion of Education.

1. General Education.—A rough indication of the state of education of the people is obtained at each Census under the three headings, "read and write," "read only," and "cannot read." The grouping of the whole population, exclusive of aborigines, in these three divisions is given for each Census since 1871 :—

EDUCATION AT CENSUS PERIODS, 1871 TO 1921.

State or Territory.		1871.	1881.	1891.	1901.	1911.	1921.
N.S.W.	Read & write	296,741	507,067	835,562	1,071,935	1,380,196	1,760,435
	Read only..	56,391	49,372	43,539	29,728	6,557	5,868
	Cannot read	149,866	193,386	244,853	253,183	259,981	334,068
(a)	Read & write	478,464	653,346	908,490	998,010	1,136,189	1,331,621
Victoria	Read only..	70,953	47,950	32,794	21,852	4,741	3,238
	Cannot read	180,781	160,270	198,556	181,208	174,621	196,421
	Read & write	74,940	136,436	276,381	376,294	508,584	633,338
Q'land	Read only..	12,080	13,657	14,618	11,737	3,542	3,108
	Cannot read	33,084	63,432	102,719	110,098	93,687	119,526
	Read & write	117,349	200,057	236,514	290,748	344,398	421,025
S. Aust.	Read only..	21,509	15,267	9,571	8,283	1,812	1,643
	Cannot read	46,768	64,541	74,346	64,126	62,348	72,492
	Read & write	14,166	19,684	34,254	150,099	237,605	283,344
W. Aust.	Read only..	2,717	2,430	2,061	3,107	972	890
	Cannot read	7,902	7,594	13,467	30,918	43,537	48,498
	Read & write	55,941	74,966	103,138	133,579	155,447	175,435
Tasm'nia	Read only..	13,946	9,606	6,287	3,907	925	610
	Cannot read	29,441	31,133	37,242	34,989	34,839	37,735
	Read & write	..	..	..	..	2,408	2,832
Northern Ter.(c)	Read only..	..	..	..	..	36	15
	Cannot read	..	..	..	..	866	1,020
	Read & write	..	..	..	..	1,424	2,093
Fed. Cap. Ter.(d)	Read only..	..	..	..	..	14	8
	Cannot read	..	..	..	..	276	471
	Read & write	1,037,601	1,591,556	2,394,339	3,020,665	3,766,251	4,610,123
C'wealth	Read only..	177,596	138,282	108,870	78,614	18,559	15,380
	Cannot read	447,842	520,356	671,183	674,522	670,155	810,231

(a) Including Federal Capital Territory prior to 1911.

(c) Included in South Australia prior to 1911.

(b) Including Northern Territory prior to 1911.

(d) Included in New South Wales prior to 1911.

It will of course be understood that the heading "cannot read" includes a large proportion of children under five years of age.

The proportion in Australia of the various classes per 10,000 of the population is shown below for each Census period :—

PROPORTION OF EDUCATED AND ILLITERATE PER 10,000 PERSONS, 1871 TO 1921.
(AUSTRALIA.)

Division.	1871.	1881.	1891.	1901.	1911.	1921.
Read and write	6,239	7,073	7,543	8,004	8,454	8,481
Read only	1,068	615	343	208	42	28
Cannot read	2,693	2,312	2,114	1,788	1,504	1,491

As pointed out previously, the "cannot read" group includes a large proportion of children under five years of age.

2. Education of Children.—The figures in the preceding tables refer to the entire population of Australia, and as the age constitution of those dwelling in the various portions thereof underwent considerable modifications during the period dealt with, a far more reliable test of the diffusion of education will be obtained by a comparison of the Census returns in regard to children of school age. For comparative purposes this has been taken to include all children in the group over five and under fifteen years of age, and the degree of education of these at each Census from 1861 to 1921 will be found below.

EDUCATION OF CHILDREN OF SCHOOL AGE AT CENSUS PERIODS, 1861 TO 1921.

State or Territory.		1861.	1871.	1881.	1891.	1901.	1911.	1921.
N.S.W. ^a	{ Read & write	34,040	68,776	121,735	196,240	251,187	291,450	371,106
	{ Read only..	20,345	26,886	25,100	21,375	15,934	993	497
	{ Cannot read	25,472	32,924	41,663	48,580	60,734	34,793	67,421
Victoria	{ Read & write	42,268	122,739	170,713	201,199	236,515	237,028	271,105
	{ Read only..	25,518	39,636	25,249	15,656	13,128	410	193
	{ Cannot read	19,341	29,490	21,421	27,441	27,765	19,621	29,002
Q'land	{ Read & write	2,156	12,698	33,317	62,402	95,635	117,347	144,419
	{ Read only..	1,534	6,104	7,019	7,580	5,955	616	296
	{ Cannot read	1,629	6,015	9,615	16,257	18,827	8,633	16,723
S. Aust. ^b	{ Read & write	15,485	30,608	46,630	58,291	69,451	69,878	89,930
	{ Read only..	8,748	12,432	7,926	4,618	4,229	248	120
	{ Cannot read	6,907	10,074	12,483	17,988	15,480	9,638	12,684
W. Aust.	{ Read & write	1,333	3,218	4,418	6,910	25,326	47,568	62,682
	{ Read only..	226	617	1,260	933	1,815	159	99
	{ Cannot read	1,015	1,795	1,593	2,348	5,431	5,234	9,636
Tasm'nia	{ Read & write	11,919	17,335	17,188	24,007	32,890	36,351	40,458
	{ Read only..	2,848	4,143	4,108	2,974	1,795	186	63
	{ Cannot read	4,581	6,663	6,606	8,829	8,475	5,575	7,377
Northern Ter. ^c	{ Read & write	..	..	..	..	..	195	314
	{ Read only..	..	..	..	..	..	..	..
	{ Cannot read	..	..	..	..	..	118	159
Fed. Cap. Ter. ^d	{ Read & write	..	..	..	..	..	322	402
	{ Read only..	..	..	..	..	..	2	4
	{ Cannot read	..	..	..	..	..	47	108
C'wealth		107,201	255,374	394,001	549,049	711,004	800,139	980,416
		59,219	89,818	70,662	53,136	42,856	2,614	1,272
		58,945	86,961	93,381	121,443	136,712	83,659	143,110

(a) Including Federal Capital Territory prior to 1911. (c) Included in South Australia prior to 1911.

(b) Including Northern Territory prior to 1911. (d) Included in New South Wales prior to 1911.

In the case of Tasmania full details for the years 1861 and 1871 are not available, and the figures for those years are approximate. The variation in degree of education may be more readily seen by reducing the foregoing figures to the basis of proportion per 10,000, and the results so obtained are embodied in the following table, a glance at which is sufficient to demonstrate the remarkable strides that at least the lower branches of education have made since 1861. In that year, only 47 per cent. of the children of school age could read and write, while 26 per cent. were illiterate. The returns for 1921 show that the proportion of those who could read and write had increased to over 84 per cent., while the totally illiterate had declined by over 50 per cent.

**EDUCATION OF CHILDREN (AGES 5 TO 14) PER 10,000 AT CENSUS PERIODS,
1861 TO 1921.**

State or Territory.		1861.	1871.	1881.	1891.	1901.	1911.	1921.
N.S.W. ^a	Read & write	4,263	5,349	6,458	7,372	7,662	8,907	8,453
	Read only..	2,547	2,091	1,332	803	486	30	11
	Cannot read	3,190	2,560	2,210	1,825	1,852	1,063	1,536
Victoria	Read & write	4,851	6,397	7,853	8,236	8,526	9,221	9,028
	Read only..	2,929	2,066	1,162	641	473	16	6
	Cannot read	2,220	1,537	985	1,123	1,001	763	966
Q'land	Read & write	4,053	5,116	6,670	7,236	7,942	9,269	8,946
	Read only..	2,884	2,460	1,405	879	495	49	18
	Cannot read	3,063	2,424	1,925	1,885	1,563	682	1,036
S. Aust. ^b	Read & write	4,973	5,763	6,956	7,206	7,790	8,761	8,754
	Read only..	2,809	2,341	1,182	571	474	31	11
	Cannot read	2,218	1,896	1,862	2,223	1,736	1,208	1,235
W. Aust.	Read & write	5,179	5,716	6,076	6,780	7,775	8,982	8,656
	Read only..	878	1,096	1,733	916	557	30	14
	Cannot read	3,943	3,188	2,191	2,304	1,668	988	1,330
Tasm'nia	Read & write	6,160	6,160	6,160	6,704	7,620	8,632	8,447
	Read only..	1,472	1,472	1,472	830	416	44	13
	Cannot read	2,368	2,368	2,368	2,466	1,964	1,324	1,540
Northern Ter. ^c	Read & write	..	..	..	..	..	6,230	6,638
	Read only..	..	..	..	..	..	..	..
	Cannot read	..	..	..	..	..	3,770	3,362
Fed. Cap. Ter. ^d	Read & write	..	..	..	..	..	9,868	7,821
	Read only..	..	..	..	..	..	5	78
	Cannot read	..	..	..	..	..	127	2,101
C'wealth								
	Read & write	4,757	5,910	7,061	7,588	7,984	9,027	8,717
	Read only..	2,628	2,078	1,266	734	481	29	11
	Cannot read	2,615	2,012	1,673	1,678	1,535	944	1,272

(a) Including Federal Capital Territory prior to 1911. (c) Including Northern Territory prior to 1911.

(b) Included in South Australia prior to 1911. (d) Included in New South Wales prior to 1911.

3. Education as shown by Marriage Registers.—Another common method of testing the spread of education is to compare the number of mark signatures with the total number of persons married during each year of a series. The percentage of males and females signing with a mark to the total persons married in the Census years 1861 to 1921 was as follows:—

EDUCATION.—MARRIAGE SIGNATURES, AUSTRALIA, 1861 TO 1921.

Proportion Signing with Marks of Total Persons Married.				Proportion Signing with Marks of Total Persons Married.			
Year.	Males.	Females.	Total.	Year.	Males.	Females.	Total.
	Per cent.	Per cent.	Per cent.		Per cent.	Per cent.	Per cent.
1861 ..	18.50	30.69	24.60	1901 ..	1.35	1.29	1.32
1871 ..	10.58	16.40	13.49	1911 ..	0.56	0.54	0.55
1881 ..	4.34	6.78	5.56	1921 ..	0.16	0.18	0.17
1891 ..	2.27	2.40	2.34				

The table shows that there has been a large diminution in illiteracy, and judging from the figures for the last few years the proportion bids fair to practically disappear.

§ 9. Miscellaneous.

1. *Scientific Societies.*—(i) *Royal Societies.* Despite the trials and struggles incidental to the earlier years of the history of Australia, higher education and scientific advancement were not lost sight of. Thus the origin of the Royal Society dates as far back as 1821, when it was founded under the name of the Philosophical Society of Australasia, Sir Thomas Brisbane being its first president. Scientific work was fitfully carried on by means of a Society whose name varied as the years rolled on. It was called the Australian Philosophic Society in 1850. In 1856 the old Australian Society merged into a resuscitated Philosophical Society of New South Wales, and its papers were published up to 1859 in the *Sydney Magazine of Science and Art* (2 vols., 1858–9). Its present title dates from 1866. Some of the papers of the old Philosophical Society were published in 1825 under the title of “Geographical Memoirs of New South Wales” (Barron Field), and contain much that is interesting in regard to the early history of Australia. One volume containing the Transactions of the Philosophical Society of New South Wales (1862–65) was published in 1866. The journal of the Society did not begin to bear a serial number, however (vol. 1), until the year 1867. “Transactions of the Royal Society of New South Wales” were published in 1867, the title of the series being altered to “Journal” in 1878. Up to the end of 1924, 58 volumes had been published. The exchange list comprises the names of 332 kindred societies. At the present time the library contains over 30,000 volumes and pamphlets, valued at about £9,000. Income and expenditure for the year ended 31st March, 1924, were £1,609 and £1,917 respectively, and the Society had on the same date 375 members.

The Royal Society of Victoria dates from 1854, in which year the Victorian Institute for the Advancement of Science and the Philosophical Society of Victoria were founded. These were amalgamated in the following year under the title of the Philosophical Institute of Victoria, whilst the Society received its present title in 1860. The first volume of its publications dates from 1855. Up to 1924, 69 volumes of proceedings had been issued. The Society exchanges with 248 kindred bodies. The constitution of the Society states that it was founded “for the promotion of art, literature, and science,” but for many years past science has monopolized its energies. A mathematical and physical section has recently been formed to encourage discussion in these sciences. The library contains over 16,000 volumes, valued approximately at £4,200. Income for the year 1924 amounted to £818, and expenditure to £769. There are 205 members on the roll.

The inaugural meeting of the Royal Society of Queensland was held on the 8th January, 1884, under the presidency of the late Sir A. C. Gregory. The Society was formed “for the furtherance of the natural and applied sciences, especially by means of original research.” Shortly after its formation it received an addition to its ranks by the amalgamation with it of the Queensland Philosophical Society, which was started at the time when Queensland became a separate colony. At the end of 1924 the members numbered 142; publications issued, 36 volumes; library, 7,500 volumes; societies on exchange list, 230. Income and expenditure in 1924 amounted to £334 and £320 respectively.

The Royal Society of South Australia grew out of the Adelaide Philosophical Society, which was founded in 1853, its object being the discussion of all subjects connected with science, literature and art. Despite this programme, the tendency of the papers was distinctly scientific, or of a practical or industrial nature. With the advent of the late Professor Tate the Society became purely scientific. Permission to assume the title of “Royal” was obtained in 1879, the Society thenceforward being known as “The Royal Society of South Australia.” In 1903 the society was incorporated. In 1924 the number of members was 120. The income for the year 1924 was £650, and expenditure £742. Up to 1924 the Society had issued 48 volumes of proceedings and 8 parts of memoirs, exclusive of several individual papers published in earlier years. The exchange list numbers about 210, while the library contains 4,250 volumes and over 1,900 pamphlets. The Field Naturalists section of the Society comprises 220 members, and issues a small quarterly journal called “The South Australian Naturalist.”

Permission to assume the title of Royal Society was granted to the Natural History and Science Society of Western Australia in March, 1914. This Society has grown out of the Mueller Botanic Society, founded in July, 1897. The objects of the Society are

the study of natural history and pure science, promoted by periodical meetings and field excursions, the maintenance of a library, and issue of reports of proceedings. It numbers at present 253 members, whose subscriptions form its only source of revenue, the income and expenditure in 1923-24 being £245 and £202 respectively. Five volumes of proceedings were issued as *Journal of the Natural History and Science Society of Western Australia*, and nine as of the *Royal Society*. Its publications are exchanged with 78 institutions at home and abroad. The library contains some 200 volumes, and over 1,000 unbound journals, pamphlets, etc.

The *Royal Society of Tasmania* (the first *Royal Society* outside the United Kingdom) was inaugurated by Sir Eardley Wilmot, Lieutenant-Governor of Van Diemen's Land, on the 14th October, 1843. It may be mentioned, however, that a scientific society had been formed as far back as 1838 under the presidency of Sir John Franklin, then Governor of the colony, and in 1841 the number of resident members was 31, and corresponding members, 38. The meetings of this parent society were held at Government House, and three volumes of proceedings were issued. A large portion of the Colonial Gardens, together with a grant of £400, was given to the Society. A library and museum were established in 1848. In 1885 the museum and gardens were given back to the State, the Society being granted room in the museum for its library and meetings. The names of Captains Ross and Crozier, of H.M.S. *Erebus* and *Terror*, appear in the list of the first corresponding members. The Society, which, since 1844, has published 63 annual volumes of proceedings, possesses 250 members, 10 corresponding members, 9 life members, exchanges with 225 kindred bodies, and has a library containing 14,000 volumes, in addition to manuscripts, etc., valued at over £10,000. Income for the year 1924 was £376, and expenditure £354.

(ii) *The Australasian Association for the Advancement of Science*. This Association was founded in 1887, with head-quarters at the Royal Society's House in Sydney. It was recognized that in addition to Royal, Linnean, and Naturalists' Societies generally, there was room for an organization representative of scientific education in Australia and New Zealand "to give a stronger impulse and a more systematic direction to scientific inquiry, to promote the intercourse of those who cultivate science in different parts of the Commonwealth of Australia, the Dominion of New Zealand, and in other countries, to obtain more general attention to the objects of science, and a removal of any disadvantages of a public kind which may impede its progress." The Association aims at co-operation between the workers in the various branches of science on the one hand, and between the professional scientist and the general public on the other. Its meetings are usually held biennially within the various States and in the Dominion of New Zealand. The next meeting will be held in Perth in August, 1926. Although the actual funds of the Association are small, liberal aid has always been forthcoming from the various State Governments, especially in connexion with the printing of the important volumes of its proceedings, of which Vol. XVI. is the latest issued. The library of the Association contains 4,000 volumes. Not the least important of the activities of the Association was the giving a constitution to the Australian National Research Council which brought in its train the Pan-Pacific Scientific Congress of 1923.

(iii) *Other Scientific Societies*. The Linnean Society of New South Wales, with head-quarters in Sydney, was founded in 1874. The soundness of its present position is due to the benefactions of Sir William Macleay, who during his lifetime and by his will endowed the Society to the amount of £67,000, which has been increased by judicious investment to nearly £80,000. Income for the year 1924 amounted to £4,862 and expenses to £5,813, including £2,110 for research purposes. The Society maintains a research bacteriologist, and offers annually 4 research fellowships in various branches of natural history. The library comprises some 12,000 volumes, valued at about £6,000. Forty-eight volumes of proceedings have been issued, and the Society exchanges with some 180 kindred institutions. The ordinary membership at the end of 1924 was 165.

The British Astronomical Society has a branch in Sydney, and in some of the States the British Medical Association has branches.

In addition to the societies enumerated above, there are various others in each State devoted to branches of scientific investigation.

2. **Public Libraries.**—In each of the capital cities there is a well-equipped Public Library, the institutions in Melbourne and Sydney especially comparing very favourably with similar institutions elsewhere. The following statement gives the number of volumes in the Public Library of each capital city :—

METROPOLITAN PUBLIC LIBRARIES, 1923.

City.	Number of Volumes in—			Total.
	Reference Branch.	Ordinary Lending Branch.	Country Lending Branch.	
Sydney	(a)328,860	(b)	39,530	368,390
Melbourne	293,439	40,860	..	339,299
Brisbane	45,834	..	..	45,834
Adelaide	122,647	43,505	..	166,152
Perth	119,137	..	16,248	135,385
Hobart	25,000	..	..	25,000

(a) Including 112,050 volumes in the Mitchell Library.

(b) The maintenance and control of the ordinary lending branch of the Public Library at Sydney were transferred in 1908 to the Municipal Council. At the end of December, 1923, the books numbered 46,423.

During 1921 the Public Library authorities in Sydney inaugurated the system of lending boxes of children's books to country schools, and 339 of these children's travelling libraries are now in circulation. Boxes are forwarded to out-back schools distant from towns. Each box contains about 40 books, and is lent for a period of four months, and then exchanged for another collection, the Library Trustees defraying the cost of carriage both ways.

A special research staff attached to the Public Library gives valuable assistance in making readily available to inquirers the store of information contained in books, etc., which, owing to limitations of space, are not in open access.

The Mitchell Library in Sydney consisted of over 60,000 volumes and pamphlets, and 300 paintings, principally relating to Australasia, valued at £100,000, and bequeathed in 1907 by Mr. D. S. Mitchell, together with an endowment of £70,000. The testator stipulated that the regulations of the British Museum were to be adopted as far as practicable, hence the library is the resort of specialists. There are now about 112,000 volumes in the library. During 1917 the Mitchell Library was further enriched by a donation of 3,676 printed volumes, 117 volumes of manuscript, and 235 pamphlets from the working library of the late John Tebbutt, of Windsor, the well-known astronomer. A very fine collection of New South Wales postage and fiscal stamps, estimated by philatelists to be worth at least £20,000, was presented to the trustees by Mr. H. L. White, of Belltrees, near Scone, in June of the same year. In 1921 this gift was supplemented by the presentation of a very fine collection of Queensland and Western Australian stamps, also valued by experts at about £20,000, and in 1922 Mrs. H. V. Hordern, a daughter of Mr. White, donated a fine collection of Tasmanian stamps.

Amongst other important libraries in New South Wales may be mentioned the "Fisher" Library at Sydney University, with 150,000 volumes; the library at the Australian Museum, 24,000; the Teachers' College library, 21,000; Sydney Technical College library, 11,000; and the library at the Botanic Gardens, 9,000. Libraries attached to the various State Schools possessed about 388,000 volumes in 1923.

The reading room at the Melbourne Public Library ranks among the finest in the world. It was opened in 1913, and has a diameter of 114 feet, with a similar height, and is capable of seating 320 readers at a time, all of whom are under efficient supervision from the centre of the room.

The library at Brisbane (South) contained about 14,000 volumes at the end of 1923.

For some years past efforts have been made in South Australia to collect original documents likely to be of service in compiling a history of the State. So far back as 1914 Professor Henderson, of Adelaide University, under commission from the South

Australian Government, visited and reported on the system of keeping archives in England, France, Belgium, Holland, and Ceylon, and obtained valuable information also from the United States and Canada. A department of historical documents has been created under the care of an archivist, and valuable preliminary work done in connexion with examination, classification, and permanent preservation of the available papers. A suitable building for housing the documents and the staff was provided in 1921. The archives contain 200,105 documents, 6,727 views, and 103 maps.

During 1922 the Tasmanian Public Library adopted the plan of lending books to individual country borrowers and to families or committees of residents in country districts. The Public Library at Launceston contains 31,000 volumes.

Mention may be made here of the free library attached to the Commonwealth Patents Office, which contains over 10,000 volumes, including literature dealing with patents in the principal countries of the world.

Statistics in regard to libraries generally are not available for all States, while the information supplied is not in all cases complete. Returns for Victoria in 1923 showed a total of 487 libraries in receipt of State or municipal aid, containing 1,243,000 books; Queensland returned 221 libraries, with 457,000 books; South Australia, 262 libraries and 786,000 books; Western Australia, 265 libraries and 288,000 books; Tasmania, 24 libraries and 116,000 books; while there are 3 libraries, with 5,000 books, in the Northern Territory.

3. Public Museums.—The Australian Museum in Sydney, founded in 1836, is the oldest institution of its kind in Australia. In addition to possessing a fine collection of the usual objects to be met with in kindred institutions, the Museum contains a very valuable and complete set of specimens of Australian fauna. The cost of construction of the building was £79,000. The number of visitors to the institution in 1923 was 210,000, and the average attendance on week-days 559, and on Sundays 1,179. The expenditure for 1923 amounted to £19,960. A valuable library containing about 24,000 volumes is attached to the Museum. Courses of evening popular lectures are delivered, and lecturers also visit distant suburbs and country districts. During 1923 a series of afternoon lectures for school children was provided. Representative collections illustrative of the natural wealth of the country are to be found in the Agricultural and Forestry Museum, and the Mining and Geological Museum. The latter institution prepares collections of specimens to be used as teaching aids in country schools. The "Nicholson" Museum of Antiquities, the "Macleay" Museum of Natural History, and the Museum of Normal and Morbid Anatomy, connected with the University, and the National Herbarium and Botanical Museum at the Sydney Botanic Gardens, are all accessible to the public. There is a fine Technological Museum in Sydney, with branches in five country centres. Valuable research work is being performed by the scientific staff in connexion with oil and other products of the eucalyptus, and essential oils of other native vegetation. During 1922 the work of the Museum was strengthened by the appointment of an advisory committee representing the scientific, general, and industrial activities of the State. The number of visitors to the Technological Museums during 1923 was about 127,000.

The National Museum at Melbourne, devoted to Natural History, Geology, and Ethnology, is located in the Public Library Building. The National Art Gallery is situated in the same building. The Industrial and Technological Museum, also housed under the same roof, contains over 10,000 exhibits. Cost of construction for the combined institutions is set down at £327,000. There is a fine Museum of Botany and Plant Products in the Melbourne Botanic Gardens. In addition to the large collection in the geological museum attached to the Mines Department in Melbourne, well-equipped museums of mining and geological specimens are established in connexion with the Schools of Mines in the chief mining districts.

The Queensland Museum dates from the year 1871, but the present building was opened in January, 1901. Since its inauguration the Government has expended on the institution a sum of £110,410, of which buildings absorbed £20,735, purchases £31,451, and salaries £58,224. The number of visitors during 1923 was 102,000, of whom 44,000 visited the institution on Sundays. The Queensland Geological Survey Museum has branches in Townsville, opened in 1886, and in Brisbane, opened in 1892.

Under the Public Library Act of 1884 the South Australian Institute ceased to exist, and the books contained therein were divided amongst the Museum, Public Library, and Art Gallery of South Australia, and the Adelaide Circulating Library. The Museum was attended by 94,000 visitors in 1923. Cost of construction of the Museum building was returned as £65,000.

The latest available returns show that the Western Australian Museum and Art Gallery contains altogether 99,000 specimens, of an estimated value of £81,500. The Museum is housed in the same building as the Art Gallery, and the visitors to the combined institutions during the year reached 63,000. Cost of construction of the building amounted to £45,800. The expenditure for the year 1923–24 was £6,187, and the Government grants for the year amounted to £8,000, the figures in each case including returns for the Public Library.

There are two museums in Tasmania—the Tasmanian Museum at Hobart, and the Victoria Museum and Art Gallery at Launceston—both of which contain valuable collections of botanical, mineral, and miscellaneous products. The Tasmanian Museum received aid from the Government during 1923 to the extent of £1,125, and the Launceston institution £500. The cost of construction in each case is included in that of Art Galleries given below.

4. Public Art Galleries.—The National Art Gallery of New South Wales originated in the Academy of Art founded in 1871. Cost of construction of the present building amounted to about £94,000. At the end of 1923 its contents, which are valued at £168,000, comprised 526 oil paintings, 418 water colours, 815 black and white, 177 statuary and bronzes, and 804 ceramics, works in metal and miscellaneous. During 1923 the average attendance on week days was 559, and on Sundays 1,179. Since the year 1895 loan collections of pictures have been regularly forwarded for exhibition in important country towns.

The National Gallery at Melbourne at the end of 1923 contained 662 oil paintings, 5,231 objects of statuary, bronzes, ceramics, etc., and 14,486 water colour drawings, engravings, and photographs. The Gallery is situated in the same building as the Museum and Public Library, the total cost of construction being £327,000. Several munificent bequests have been made to the institution. That of Mr. Alfred Felton, given in 1904, amounts to about £8,000 per annum. In 1913, Mr. John Connell presented his collection of art furniture, silver, pictures, etc., the whole being valued at £10,000. The Art Gallery at Ballarat contains over 400 oil paintings and water colours, with some fine statuary, bronzes, etc., while there are some valuable works of art in the small galleries at Bendigo, Castlemaine, Geelong, and Warrnambool, and in some cases pictures are sent on loan from the National Gallery.

The Queensland National Art Gallery, situated in the Executive Buildings, Brisbane, was founded in 1895, and contains a small, but well chosen collection of pictures. At the end of 1923 there were on view 104 oil paintings, 28 water colours, 147 black and white, and 33 pieces of statuary, together with various prints, mosaics, and miniatures. Exclusive of exhibits on loan, the contents are valued at about £11,300. Visitors during the year averaged 160 on Sundays and 119 on week days.

The Art Gallery at Adelaide dates from 1880, when the Government expended £2,000 in the purchase of pictures, which were exhibited in the Public Library Building in 1882. The liberality of private citizens caused the gallery to rapidly outgrow the accommodation provided for it in 1889 at the Exhibition Building, and on the receipt of a bequest of £25,000 from the late Sir T. Elder, the Government erected the present building, which was opened in April, 1900. The Gallery also received bequests of £16,500 in 1903 from the estate of Dr. Morgan Thomas, and of £3,000 in 1907 from Mr. David Murray. At the 30th June, 1924, there were in the Gallery 616 paintings in oil and water colour, 232 drawings and black and whites, 225 statuary, furniture, and art work, 3,848 prints, and 1,257 ceramics and miscellaneous. Building and site are valued at upwards of £31,000. Visitors during the year 1924 numbered 79,000. The cost of construction of the Art Gallery amounted to £22,000.

The foundation stone of the present Art Gallery at Perth in Western Australia was laid in 1901, and, as is the case in Melbourne, the Public Library, Museum, and Art Gallery are all situated in the one structure. The collection comprises 107 oil paintings, 53 water colours, 256 black and white, 275 statuary, and 1,150 ceramic and other art objects. It is estimated that the collections in the Gallery possess a value of about £15,000. Visitors to the Museum and Art Gallery in 1923 numbered 63,000.

In Tasmania, the Art Gallery at Hobart was opened in 1887. Its present contents consist of 125 oil paintings, 132 water colours, 21 black and white, and 175 etchings, engravings, etc., the value of the contents being estimated at £5,000. The cost of construction of the building was £4,500.

The Art Gallery at Launceston was erected in 1888 at a cost of £6,000, and opened on the 2nd April, 1891. Only a small proportion of the contents belongs to the gallery, the bulk of the pictures being obtained on loan. At latest date there were on view 100 oil paintings, 65 water colours, and miscellaneous exhibits, the whole being valued at £4,900.

5. State Expenditure on all Forms of Educational Effort.—The expenditure from the Consolidated Revenue in each State and Territory on all forms of educational and scientific activity during each of the last five financial years was as follows :—

EXPENDITURE ON EDUCATION, SCIENCE, AND ART, 1919-20 TO 1923-24.

State or Territory.		1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
New South Wales ..	Total £	2,359,900	3,737,960	3,736,294	3,777,551	3,779,896
	Per head	23/1	35/8	35/1	34/9	34/2
Victoria ..	Total £	1,474,877	1,847,184	1,955,036	2,048,949	2,166,763
	Per head	19/7	24/2	25/3	25/9	26/8
Queensland ..	Total £	1,103,334	1,350,399	1,362,197	1,349,387	1,410,089
	Per head	30/0	36/0	35/6	34/3	34/9
South Australia ..	Total £	487,609	607,160	627,075	623,902	709,728
	Per head	20/3	24/9	25/0	24/4	27/-
Western Australia ..	Total £	460,384	543,356	596,518	604,947	621,168
	Per head	28/1	32/10	35/6	35/3	35/1
Tasmania ..	Total £	179,871	263,524	281,677	281,602	271,321
	Per head	17/2	24/9	25/10	25/9	24/9
Northern Territory	Total £	2,467	4,291	4,860	4,884	4,515
	Per head	10/10	21/6	26/0	27/6	25/5
Australia ..	Total £	6,068,442	8,353,874	8,563,657	8,691,222	8,963,480
	Per head	22/11	30/11	31/1	30/10	31/2

The comparatively heavy increases during the last five years are partly due to the expanding provision for State-aided education, to greater cost of building, equipment, and maintenance, and to increments in teachers' salaries and allowances.

CHAPTER X. PUBLIC JUSTICE.

§ 1. Police.

1. **General.**—In early issues of the Year Book a résumé was given of the evolution of the police force in Australia up to the passing of the Police Act of 1862 (25 Vic. No. 16) in New South Wales, but considerations of space preclude its inclusion in the present volume.

2. **Strength of Police Force.**—(i) *General.* The strength of the police force in each State during the five years ended 1923 is given in the table hereunder. It may be mentioned that the police forces are entirely under State control, but, by arrangement, the Commonwealth Government utilizes their services in various directions, such as the collection of particulars for Commonwealth electoral rolls, etc.

POLICE FORCES.—STRENGTH, 1919 TO 1923.

State.	Area of State in Sq. Miles.	1919.	1920.	1921.	1922.	1923.
New South Wales ..	310,372	2,569	2,630	2,738	2,799	2,825
Victoria ..	87,884	1,719	1,733	1,736	1,741	1,251
Queensland ..	670,500	1,119	1,126	1,105	1,113	1,114
South Australia ..	380,070	541	566	593	576	599
Western Australia ..	975,920	466	473	493	489	502
Tasmania ..	26,215	243	240	240	240	240
Northern Territory ..	523,620	32	32	30	32	32
Total ..	2,974,581	6,689	6,800	6,935	6,990	6,563

The figures for New South Wales for 1923 are exclusive of 31 "black trackers," i.e., natives employed in detection of offenders chiefly in outlying districts, and 4 female searchers. For Queensland the figures exclude 65 native trackers and 1 female searcher; for South Australia 11 "black trackers" and 1 female searcher, and for the Northern Territory 28 "black trackers." There are also 44 "black trackers" and 5 female searchers in Western Australia, not included in the table. According to the returns, women police are employed in all the States except Queensland, the respective numbers being—New South Wales 4, Victoria 4, South Australia 9, Western Australia 6, and Tasmania 1. Their work is mainly preventive, and the importance and usefulness of their duties have been referred to in very high terms, especially by the Commissioners of Police in South Australia and Western Australia.

The strength of the force in Victoria for the year 1923 is below normal, owing to dismissals consequent on the dispute which occurred in November of that year.

(ii) *Proportion to Population.* The average number of inhabitants to each officer in each State during the same period is as follows. In considering these figures, allowance must, of course, be made for the unequal area and unequal distribution of the population of the various States.

POLICE FORCES.—COMPARISON WITH POPULATION, 1919 TO 1923.

State.	Number of Persons per Sq. Mile, 1921 Census.	Inhabitants to each Police Officer.				
		1919.	1920.	1921.	1922.	1923.
New South Wales ..	6.80	779	787	770	769	777
Victoria ..	17.42	857	873	885	902	1,285
Queensland ..	1.13	646	662	690	702	720
South Australia ..	1.30	866	860	839	879	864
Western Australia ..	0.34	687	698	677	695	694
Tasmania ..	8.15	843	876	889	895	897
Northern Territory ..	..	145	131	130	114	113
Total ..	1.83	777	788	787	797	867

As explained previously the figures for Victoria for the year 1923 are abnormal.

3. Duties of the Police.—In addition to the ordinary employment attaching to their office, the police are called upon to perform many duties which in other countries are carried out by various functionaries. Thus, in New South Wales, according to the Report of the Inspector-General, the time of one-fifth of the force was taken up during 1921 in extraneous duties unconnected with the protection of life and property, while the cash value of the services rendered to other Government departments was stated as over £200,000 per annum. The Queensland Commissioner refers to the circumstance that in 1923 no less than 68 subsidiary offices were held by the police. In South Australia, the Commissioner alludes to the large number of subsidiary duties performed by police officers, and mentions that in 1923 over 90,000 inquiries were made on behalf of other departments.

While these special tasks doubtless involve some degree of sacrifice of ordinary routine duties, the fact that the general intelligence of the police is adequate for their performance, besides being most creditable, results in a large saving of the public money.

4. Cost of Police Forces.—The expenditure from Consolidated Revenue on the police forces, and the cost per head of population in each State during the five years 1919 to 1923 are given in the following table:—

POLICE FORCES.—COST, 1919 TO 1923.

State.	1919.	1920.	1921.	1922.	1923.
TOTAL.					
	£	£	£	£	£
New South Wales	977,506	1,101,767	1,150,323	1,205,557	1,219,244
Victoria	490,016	577,407	579,351	600,856	755,698
Queensland	407,480	476,153	458,955	455,519	461,446
South Australia	159,258	197,157	211,428	216,109	221,635
Western Australia	171,832	186,717	184,245	181,893	185,945
Tasmania	66,940	79,372	79,105	77,096	78,313
Northern Territory	11,435	12,970	15,520	16,011	16,070
Total	2,284,467	2,631,543	2,678,927	2,753,041	2,938,351
PER HEAD OF POPULATION.					
	s. d.	s. d.	s. d.	s. d.	s. d.
New South Wales	9 7	10 6	10 10	11 1	11 0
Victoria	6 6	7 7	7 6	7 7	9 4
Queensland	11 1	12 8	11 11	11 7	11 5
South Australia	6 10	8 0	8 5	8 5	8 5
Western Australia	10 6	11 3	11 0	10 7	10 6
Tasmania	6 5	7 6	7 3	7 0	7 2
Northern Territory	50 4	65 0	81 6	90 2	90 5
Total	8 7	9 9	9 9	9 9	10 3

The total for New South Wales in 1923 includes £116,300 payment to the Police Superannuation Fund. Similar payments in Victoria and Queensland amount to £64,500 and £46,500 respectively, while smaller sums are included in the returns for other States.

The relatively high cost per head in Queensland and Western Australia is due to the fact that there are in those States extensive areas of sparsely settled country, in which mounted patrols have to be maintained. In view of the small number of its white population and the vast extent of country to be patrolled, the figures for the Northern Territory necessarily show a very high average. The duties of the police, moreover, chiefly pertain to matters connected with the control of aborigines. It may be noted also that the high cost and cost per head in Victoria shown for the year 1923, as compared

with previous years, are accounted for by expenditure in connexion with the police dispute in 1923.

The general advance in cost during the period under review is due to increases in salaries, and rise in prices of supplies and equipment.

5. *Interstate Police Conferences.*—In February, 1921, a Conference of the chief officers of the police forces of the various States was held in Melbourne. In addition to the discussion of matters of common interest, arrangements were made for the interchange of detectives. The results were so satisfactory that it was decided to hold similar Conferences annually. The third Conference was held in Melbourne in March, 1923.

§ 2. Lower (Magistrates') Courts.

1. *General.*—In considering the criminal returns of the various States, due allowance must be made on account of several factors, such as the relative powers of the courts, both lower and higher, etc. In the case of lower courts, the actual number of laws in each State the breach of which renders a person liable to fine or imprisonment must be taken into account. Again, the attitude of the magistracy and police towards certain classes of offences is a factor, for in the case of liquor laws, or laws connected with vagrancy or gaming, the views of magistrates, and instructions issued to the police, may be responsible for considerable variations in the returns. The strength and distribution of the police forces, and the age-constitution and distribution of the State's population, also influence the results. Due weight should also be given to the prevalence of undetected crime, but information on this point can be obtained only for the State of Victoria. It may be mentioned that each State has its own separate judicial system, the Commonwealth jurisdiction being confined to the High Court of Australia, which is largely a Court of Appeal intermediate to the Privy Council, although it has also original jurisdiction, and the Commonwealth Court of Arbitration and Conciliation. Full particulars regarding the judicial power of the Commonwealth will be found in Chapter III. of the Commonwealth Constitution, which is quoted in full in Chapter I. of this work.

2. *Powers of the Magistrates.*—In New South Wales there is no general limit to the powers of the magistrates in regard to offences punished summarily, their authority depending in each case on the statute which creates the offence and gives them jurisdiction. Except in the case of a very few statutes, and excluding cumulative sentences, the power of sentence is limited to six months. Imprisonment in default of payment of fine is regulated by a scale limiting the maximum period according to the sum ordered to be paid, but in no case exceeding twelve months. Actions for debt and damage within certain limits also come within magisterial jurisdiction. In cases of debts, liquidated or unliquidated, the amount recoverable is not exceeding £50 before a court constituted of a stipendiary or police magistrate at certain authorized places, and not exceeding £30 at any other place before a court constituted of a stipendiary or police magistrate or two or more justices of the peace. The amount in actions of damage is limited to £10, but may extend to £30 by consent of parties.

In Victoria, the civil jurisdiction of magistrates is restricted to what may be designated ordinary debts, damages for assault, restitution of goods, etc., where the amount in dispute does not exceed £50. No definite limit is fixed to the powers of the magistrates on the criminal side, and for some offences sentences up to two years may be imposed. The proportion of long sentences is, however, comparatively small.

In Queensland, generally speaking, the maximum term of imprisonment which justices can inflict is six months, but in certain exceptional cases, such as offences against sections 233 and 445 of the Criminal Code (betting-houses and illegally using animals) sentences of twelve months may be imposed. No limit exists as to the extent to which cumulative sentences may be applied, but in practice the term is never very lengthy.

In South Australia, under the Minor Offences Act, magistrates can impose sentences up to six months, and under the Summary Convictions Act, up to three months. The Police Act of 1916 gives power to sentence up to one year, with hard labour, in the case of incorrigible rogues; while under the Quarantine Act of 1877, and the Lottery and Gaming Act of 1875, sentences of two years may be imposed.

Under the Petty Offences Act of 1867, in Tasmania, any person charged with having committed, or with having aided or abetted in the commission of an offence, in regard to property of a value not exceeding £10, may, on conviction, for a first offence, before two or more justices in Petty Sessions, be imprisoned for any term not exceeding one year, and for a term not exceeding two years for a second or subsequent offence.

3. Persons Charged at Magistrates' Courts.—The total number of persons who were charged before magistrates in each State is given below for the five years 1919 to 1923 :—

MAGISTRATES' COURTS.—PERSONS CHARGED, 1919 TO 1923.

State.	1919.	1920.	1921.	1922.	1923.
New South Wales	78,103	89,572	94,685	96,989	104,519
Victoria	58,470	56,698	62,402	63,713	67,112
Queensland	21,926	24,180	24,479	25,185	25,956
South Australia	8,804	10,143	10,622	11,821	14,321
Western Australia	9,769	10,430	10,775	10,844	10,182
Tasmania	6,362	6,629	7,185	7,106	8,479
Northern Territory	221	221 ^a	115	186	154
Total	183,655	197,873	210,263	215,844	230,723

(a) Year 1919. Returns for 1920 not available.

Investigation of the returns shows that considerable variations in the total for single States are occasioned by breaches of new Acts, or the more stringent enforcement of the provisions of existing Acts. Any deductions drawn from the total returns as to the increase or otherwise of criminality must, therefore, be largely influenced by a careful analysis of the detailed list of offences.

4. Convictions and Committals.—The figures given in the tabulation above include, of course, a number of people who were wrongly charged, and statistically are not of general importance. The actual number of convictions in connexion with the persons who appeared before the lower courts in each year of the period 1919 to 1923 is, therefore, given hereunder. A separate line is added showing the committals to higher courts.

MAGISTRATES' COURTS.—CONVICTIONS AND COMMITTALS, 1919 TO 1923.

State.		1919.	1920.	1921.	1922.	1923.
New South Wales ..	Convictions	64,518	74,667	80,214	82,263	88,864
	Committals	1,680	2,239	2,594	2,495	2,654
Victoria	Convictions	44,623	43,088	46,924	49,464	53,183
	Committals	575	795	776	733	634
Queensland	Convictions	19,773	21,922	22,479	22,982	23,072
	Committals	255	309	328	331	341
South Australia ..	Convictions	7,527	8,628	8,968	10,048	12,647
	Committals	74	123	121	146	193
Western Australia ..	Convictions	8,702	9,198	9,605	9,748	8,985
	Committals	127	112	120	68	92
Tasmania	Convictions	5,807	6,034	6,474	6,385	7,601
	Committals	55	71	88	79	78
Northern Territory	Convictions	187	187 ^a	100	171	117
	Committals	3	3 ^a	8	4	3
Total	Convictions	151,137	163,724	174,764	181,061	194,496
	Committals	2,769	3,652	4,035	3,856	3,995

(a) Year 1919. Returns for 1920 not available.

5. **Convictions for Serious Crime.**—While the figures given in the preceding table refer to the entire body of convictions, the fact must not be overlooked that they include a large proportion of offences of a technical nature, many of them unwittingly committed, against various Acts of Parliament. Cases of drunkenness and minor breaches of good order, which, if they can be said to come within the category of crime at all, at least do so in a very different sense to some other offences, also help to swell the list. The following table has therefore been prepared for the purpose of showing the convictions at magistrates' courts for what may be regarded as the more serious offences, *i.e.*, against the person and property, either separately or conjointly, and forgery and offences against the currency :—

MAGISTRATES' COURTS.—CONVICTIONS FOR SERIOUS CRIME, 1919 TO 1923.

State.	1919.	1920.	1921.	1922.	1923.
TOTAL.					
New South Wales ..	7,232	7,704	8,057	7,744	7,543
Victoria	2,976	4,294	3,719	2,909	3,188
Queensland	1,526	1,357	1,747	1,835	2,021
South Australia ..	629	772	855	653	883
Western Australia ..	995	993	976	977	930
Tasmania	594	548	550	577	637
Northern Territory ..	11	11 ^a	42	60	17
Total	13,963	15,679	15,946	14,755	15,219

(a) Year 1919. Returns for 1920 not available.

PER 10,000 OF THE POPULATION.

New South Wales ..	36.1	37.2	38.2	36.0	34.4
Victoria	20.2	28.4	24.2	18.5	19.8
Queensland	21.1	18.2	22.9	23.5	25.2
South Australia ..	13.4	15.9	17.2	12.9	17.1
Western Australia ..	31.1	30.1	29.2	28.8	26.7
Tasmania	29.0	26.0	25.8	26.9	29.6
Northern Territory ..	23.6	26.1	107.5	164.2	47.1
Total	26.9	29.3	29.2	26.5	26.8

6. **Decrease in Serious Crime, 1881 to 1923.**—(i) *Rate of Convictions.* The figures quoted in the preceding table show that while during the last five years the rate of serious crime has increased somewhat, if the comparison be carried back to 1881 the position is seen to be more satisfactory. The rate of convictions at magistrates' courts per 10,000 of the population is given below for each of the years 1881, 1891, 1901, 1921, and 1923. Only the more serious offences particularized in the preceding sub-section have been taken into consideration.

MAGISTRATES' COURTS.—SERIOUS CRIME.—RATE OF CONVICTIONS, 1881 TO 1923.

Year.	Convictions per 10,000 Persons.				
1881	69.3
1891	44.8
1901	29.1
1921	29.2
1923	26.8

The figures already quoted refer to total convictions, and in respect of individuals necessarily involve a considerable amount of duplication, especially in minor offences, such as petty larcenies, etc.

(ii) *Causes of Decrease.* The statistics given above show that there has been a considerable decrease in crime throughout Australia during the period dealt with. The results so far quoted are restricted entirely to the lower or magistrates' courts. There has also been a gratifying decrease in regard to offences tried at the higher courts, as will be seen later.

Attempts have been made to account for this decline: *e.g.*, advance in education, enlightened penological methods, etc. Much depends upon what is meant by education. Many classed in census statistics as "educated" can barely read and write. In this connexion, moreover, it ought not to be forgotten that collaterally with the introduction of ordinary intellectual education certain people have departed from their pristine virtues. In regard to the deterrent effect of punishment, it may be said that in respect of many offences, notably drunkenness, vagrancy, petty larcenies, etc., it appears to be almost negligible. In general, punishment has declined in brutality and severity, and has improved in respect of being based to a greater extent upon a scientific penological system, though in this latter respect there is yet much to be desired. Recent advances in penological methods will be referred to in a subsequent sub-section. Here it will be sufficient to remark that under the old régime, a prisoner on completion of a sentence in gaol was simply turned adrift on society, and in many cases sought his criminal friends, and speedily qualified for readmission to the penitentiary. Frequently he was goaded to this by mistaken zeal on the part of the police, who took pains to inform employers of the fact of a man having served a sentence in gaol. For a long time any assistance to discharged prisoners was in the hands of private organizations, such as the Salvation Army Prison Gate Brigade, but in some of the States, and notably in New South Wales, the authorities themselves look after the welfare of discharged prisoners in the way of finding work, providing tools, etc. Improvements in the means of communication and identification have been responsible for some of the falling-off noticeable in the criminal returns, the introduction of the Bertillon system having contributed to certainty of identification. In his report for the year 1910 the Inspector-General of Police in New South Wales states that "criminals have a wholesome dread of the finger-print system, and I have not the slightest doubt that it is one of the principal causes of the diminution of serious crimes." Part of the improvement may no doubt be referred also to the general amelioration in social conditions that has taken place during the last fifty years.

7. *Drunkenness.*—(i) *Cases and Convictions.* The number of cases of drunkenness and the convictions recorded in connexion therewith during the period 1919 to 1923 will be found in the following table:—

DRUNKENNESS.—CASES AND CONVICTIONS, 1919 TO 1923.

State.	1919.		1920.		1921.		1922.		1923.	
	Cases.	Convictions.	Cases.	Convictions.	Cases.	Convictions.	Cases.	Convictions.	Cases.	Convictions.
New South Wales ..	19,834	19,546	26,080	25,843	29,047	28,702	30,913	30,723	33,118	32,938
Victoria ..	6,237	3,000	7,154	3,834	7,621	4,334	8,773	5,201	10,131	6,207
Queensland ..	12,178	11,403	12,017	11,712	12,166	11,744	13,014	12,632	12,376	11,832
South Australia ..	3,197	3,171	3,463	3,448	3,465	3,443	3,775	3,764	4,512	4,496
Western Australia ..	3,612	3,595	4,222	4,185	4,135	4,103	3,740	3,715	3,193	3,165
Tasmania ..	485	474	536	530	539	531	539	535	506	501
Northern Territory	109	109	(a)109	(a)109	51	51	112	104	37	37
Total ..	45,652	41,298	53,581	49,661	57,024	52,908	60,871	56,677	63,878	59,176

(a) For 1919. Returns for 1920 not available.

The number of convictions is, as might naturally be expected, almost identical with the number of cases. Victoria, however, is an exception, but in this State it is explained that offenders are generally discharged on a first appearance, and no conviction is recorded, a similar procedure being also adopted in the case of those arrested on Saturday and detained in custody till Monday. The logic of excluding these cases from the list of convictions is open to doubt.

(ii) *Convictions per 10,000 of Population.* The convictions for drunkenness per 10,000 of the population during each of the years from 1919 to 1923 are given hereunder :—

DRUNKENNESS.—CONVICTIONS PER 10,000 INHABITANTS, 1919 TO 1923.

State.	1919.	1920.	1921.	1922.	1923.
New South Wales	97.6	124.9	136.0	142.7	148.9
Victoria	20.4	25.4	28.2	33.1	38.2
Queensland	157.6	157.0	153.9	161.7	145.9
South Australia	67.7	70.9	69.2	74.4	85.7
Western Australia	112.4	126.8	122.9	109.4	89.5
Tasmania	23.1	25.2	24.9	24.9	22.9
Northern Territory	234.2	258.8	130.6	284.7	104.1
Total	79.5	92.7	96.9	101.8	102.9

The convictions for drunkenness taken by themselves are not an altogether satisfactory test of the relative sobriety of the inhabitants of each State, inasmuch as several important factors must be taken into consideration. The age and sex constitution of the people, for example, is by no means identical in each State, Western Australia having by far the largest proportion of adult males. Owing to the smallness of the population the figures for the Northern Territory are, of course, abnormal. The avocations of the people affect the result, since persons engaged in strenuous callings are, on the whole, more likely to indulge in alcoholic stimulants than those employed in less arduous ones. The distribution of the population is also a factor, the likelihood of arrest or summons for drunkenness obviously being greater in the more densely populated regions, and lastly, allowance must be made for the attitude of the magistracy, the police, and the public generally in regard to the offence. Due account also must be taken of the recent legislation dealing with the limitation of hours during which liquor may be sold in hotels.

(iii) *Consumption of Intoxicants.* It is not unusual to supplement statistics of drunkenness by furnishing also the relative consumption of alcoholic beverages. Deductions drawn therefrom will be very misleading if they fail to take into account also the consumption of non-intoxicating beverages such as tea and coffee, and the general habits of the people. Throughout the greater part of Europe, tea and coffee are consumed but sparingly, while Australia, as is well known, is one of the greatest tea-drinking countries of the world.

The following table shows the consumption of spirits, wine, and beer per head of the population in Australia during each year of the quinquennium 1920-24 :—

INTOXICANTS, CONSUMPTION.—AUSTRALIA, 1920 to 1924.

Year.	Consumption per Head of Population.		
	Spirits.	Wine.	Beer.
	Imp. Galls.	Imp. Galls.	Imp. Galls.
1919-20	0.45	0.50	13.39
1920-21	0.36	0.50	12.20
1921-22	0.36	0.50	11.49
1922-23	0.39	0.50	11.30
1923-24	0.43	0.50	11.08

The figures in regard to wine are approximate, as it is impossible to ascertain the exact quantity of the production which goes into consumption in the form of wine.

(iv) *Treatment of Drunkenness.* (a) *General.* Though the problem of the correct method of dealing with dipsomania is by no means an easy one, it seems fairly clear that the present plan of bringing offenders before magistrates, and subjecting them to the penalty of imprisonment or fine, has little deterrent effect, as the same offenders are constantly reappearing before the courts. Further, the casting of an inebriate into prison, and placing him in his weakened mental state in the company of professional malefactors, certainly lowers his self-respect, and doubtless tends to swell the ranks of criminals. Examination of the prison records in New South Wales some years ago

disclosed the fact that over 40 per cent. of the gaol population had commenced their criminal career with a charge of drunkenness. During the last few years the dangers of moral contamination in this way have been more accurately appreciated, and a system of classification of prisoners has been adopted whereby the petty offender is as far as possible kept from association with the more evilly-disposed. The Comptroller-General of Prisons in Queensland stated in his Report for the year 1907 that "the drunken habit in many cases is merely one of many symptoms which jointly indicate the existence of a graver condition than simple habitual drunkenness."

(b) *Remedial.* Legislation has been passed in each State, providing for the commitment of inebriates to special Government institutions. The laws in the various States are as follows:—New South Wales, Inebriates Act 1912; Victoria, Inebriates Act 1915 and 1923; Queensland, Inebriate Institutions Act 1896; South Australia, Inebriates Acts 1908, 1913, and 1920; Western Australia, Inebriates Acts 1912 and 1919; Tasmania, Inebriates Act 1885, Inebriate Hospitals Act 1892. Curative work was first undertaken by the Government of New South Wales in 1907. In most cases the institutes are connected with the gaols, and, naturally, custodial measures are still a strong feature in their management; nevertheless, the results of remedial measures have been encouraging.

8. *First Offenders.*—In all the States and in New Zealand statutes dealing with first offenders have been in force for some years, the dates of passing the Acts being as follows:—New South Wales, 1894; Victoria, 1890, 1908, and 1915 (Crimes Act, sec. 340); Queensland, 1887; South Australia, 1887 and 1913; Western Australia, 1892; Tasmania and New Zealand, 1886. The method of procedure is practically the same in all cases, *i.e.*, with regard to most first offenders the magistrate or judge is empowered to allow the offender to go free on recognizances being entered into for his good behaviour for a certain period. In practice, this humane law has been found to work excellently, very few of those to whom its provisions have been extended having been found to relapse into crime.

9. *Children's Courts.*—Special courts for the trial of juvenile offenders have been established in New South Wales, Victoria, Western Australia, Tasmania, and New Zealand within the last few years, while Children's Courts, although not under that name, are practically provided for by the State Children's Acts of 1895 and 1900 in South Australia. The object of these Courts is to avoid, as far as possible, the unpleasant surroundings of the ordinary police court.

10. *Committals to Superior Courts.*—(i) *General.* In a previous sub-section it has been pointed out that comparisons of criminality based on a consideration of the total returns from magistrates' courts are somewhat inadequate, seeing that the figures include numbers of cases which are merely technical breaches of laws having in some instances a purely local significance. The committals to higher courts give a better basis of comparison, although even in this connexion allowance must be made for the want of uniformity in jurisdiction. The table below gives the number of committals in each year from 1919 to 1923, with the rate of such committals per 10,000 of the population.

COMMITTALS TO SUPERIOR COURTS, 1919 TO 1923.

State.		1919.	1920.	1921.	1922.	1923.
New South Wales	No.	1,680	2,239	2,594	2,495	2,654
	Rate	8.4	10.8	12.3	11.6	12.1
Victoria ..	No.	575	795	776	733	634
	Rate	3.9	5.3	5.0	4.7	3.9
Queensland ..	No.	255	309	328	331	341
	Rate	3.5	4.1	4.3	4.2	4.2
South Australia ..	No.	74	123	121	146	193
	Rate	1.6	2.5	2.4	2.9	3.7
Western Australia	No.	127	112	120	68	92
	Rate	4.0	3.4	3.6	2.0	2.6
Tasmania ..	No.	55	72	88	79	78
	Rate	2.7	3.4	4.1	3.7	3.6
Northern Territory	No.	3	3	8	4	3
	Rate	6.4	7.1	20.5	10.9	8.3
Total ..	No.	2,769	3,653	4,035	3,856	3,995
	Rate	5.3	6.8	7.4	6.9	7.0

(ii) *Decrease in Rate since 1861.* The above figures show that the rate of committals for serious crime has increased by 32 per cent. during the last five years, but if the comparison be carried further back, it will be found that, as compared with the earlier years, there has been a considerable improvement. This will be evident from an examination of the following figures, which show the rate of committals per 10,000 persons in Australia at various periods since 1861 :—

RATE OF COMMITTALS, AUSTRALIA, 1861 TO 1923.

Year	1861.	1871.	1881.	1891.	1901.	1911.	1921.	1923.
Committals per 10,000 inhabitants	22	14	12	11	8	6	7	7

The decline in proportion to population since 1861 has therefore been about 68 per cent.

§ 3. Superior Courts.

1. *Convictions at Superior Courts.*—The number of convictions at superior courts, with the rate per 10,000 of the population are given below for each of the years 1919 to 1923 :—

SUPERIOR COURTS.—CONVICTIONS, 1919 TO 1923.

State.		1919.	1920.	1921.	1922.	1923.
New South Wales	{ No.	762	1,027	1,111	1,040	1,059
	{ Rate	3.8	5.0	5.3	4.8	4.8
Victoria..	{ No.	347	461	520	463	400
	{ Rate	2.4	3.0	3.4	2.9	2.5
Queensland	{ No.	254	302	338	378	278
	{ Rate	3.5	4.0	4.4	4.8	3.5
South Australia ..	{ No.	47	83	97	113	120
	{ Rate	1.0	1.7	2.0	2.2	2.3
Western Australia	{ No.	63	69	70	40	80
	{ Rate	2.0	2.1	2.1	1.2	2.3
Tasmania	{ No.	39	51	57	55	56
	{ Rate	1.9	2.4	2.7	2.6	2.6
Northern Territory	{ No.	..	..	3	3	2
	{ Rate	..	..	7.7	8.2	5.5
Total	{ No.	1,512	1,993	2,196	2,092	1,995
	{ Rate	2.9	3.7	4.0	3.8	3.5

The rate in 1901 was 4.6 per 10,000, and the decrease to the end of 1923 was, therefore, about 24 per cent.

In considering the above figures allowance must be made for the various factors enumerated in a preceding paragraph. South Australia, Western Australia and Tasmania, it will be noted, show the smallest proportion of serious crime, while the rates for New South Wales and the Northern Territory are the highest, the figures for the latter, however, owing to the particular conditions prevailing there being abnormal.

2. *Offences for which Convictions were Recorded at Superior Courts.*—In the following table will be found a classification of the principal offences for which persons were convicted at the higher courts during each year of the period 1919 to 1923. Owing to

lack of uniformity in the presentation of the returns the information is confined to the chief offences against the person only.

SUPERIOR COURTS.—CONVICTIONS, SERIOUS CRIME, AUSTRALIA, 1919 TO 1923.

Offences.	1919.	1920.	1921.	1922.	1923.
Murder, and attempts at ..	34	20	29	36	15
Manslaughter	14	18	17	10	15
Rape, and attempts at ..	3	7	8	5	9
Other offences against females ..	66	69	87	95	130
“ “ “ the person	220	223	235	240	246
Total	337	337	376	386	415

The total convictions for similar offences in 1901 amounted to 432, the decline during the period 1901 to 1923 amounting therefore to about 4 per cent.

3. **Habitual Offenders.**—In New South Wales the Habitual Criminals Act of 1905 gives judges the power of declaring a prisoner, after a certain number of sentences, to be an habitual criminal, and as such to be detained until, in the opinion of the authorities, he is fit to be at large. At the end of 1923 there were 36 persons in prison under this Act. Since the passing of the Act, 98 offenders, including 1 female have been declared to be habitual criminals. The Indeterminate Sentences Act came into force in Victoria in July, 1908, and up to the end of June, 1924, 878 prisoners had been released on probation or parole. Of this number, 297 were re-convicted or returned for not observing the conditions of release, and 570 have not returned to prison. Of the latter, 256 are still on probation or parole, and 314 have completed their probation and are out of the Board's control. At the 30th June, 1923, the number under indeterminate detention was 140. The Criminal Code Amendment Act of 1914, which makes provision for the detention and control of habitual criminals, was assented to in Queensland on the 3rd December, 1914, and the first cases in connexion therewith were dealt with in 1922, when 2 prisoners were declared to be habitual criminals. At the end of 1923 there were 10 prisoners under detention as habitual criminals. The provisions of the Habitual Criminals Amendment Act of 1907 were put into force in South Australia in 1909, and 24 criminals had been declared to be habitual offenders up to the end of 1923. Of these, 21 had been released after serving the indeterminate portion, and 3 were serving the definite portion of their sentence. In Western Australia, under the Criminal Code Amendment Act of 1918, power is given to declare a prisoner after a certain number of convictions to be an habitual criminal. The number under preventive detention on the 30th June 1923, was 22, and the total number dealt with since the passing of the Act was 74. During the period in which the Habitual Criminals and Offenders Act of 1907 (now Indeterminate Sentences Act 1921) has been in force in Tasmania, 141 prisoners have been released under its provisions, and the results, according to the Sheriff, have been satisfactory, only four prisoners having defaulted. The Comptroller-General of Prisons in New South Wales points out that the system has exercised a wholesome deterrent effect on the criminal who is not a prisoner, while the Indeterminate Sentence Board in Victoria states that it has become impressed with the advantages which this form of sentence offers, both from a reformatory and deterrent standpoint, over the ordinary sentence. In New South Wales it is stated that while old associations and habits have in some cases proved too strong for the released “habitual,” many of them have done well, and, generally, there is hope of reformation in the average prisoner other than the sexual offender.

4. **Capital Punishment.**—The table below gives the number of executions in each State during the period 1919 to 1923 :—

EXECUTIONS, 1919 TO 1923.

State.	1919.	1920.	1921.	1922.	1923.
New South Wales .. ..	..	..	..	..	..
Victoria .. ..	..	..	..	1	..
Queensland .. ..	..	..	..	..	..
South Australia	1	1	..	..	..
Western Australia .. ..	..	..	..	1	..
Tasmania .. ..	..	..	..	1	..
Total	1	1	..	3	..

In the early days of the history of Australia the penalty of death was attached to a large number of offences, many of which at the present time would be dealt with in the lower or magistrates' courts. With the growth of settlement, and the general amelioration in social and moral conditions, the list was, however, considerably curtailed, and the existing tendency is practically to restrict death sentences to cases of murder. It may be remarked that in cases of rape, which is a capital offence in some of the Australian States, the penalty has been but sparingly inflicted during the last few years. Juries are reputed to be loth to convict on this charge, owing to the uncertainty whether sentence of death will be pronounced.

Under the Criminal Code Amendment Act of 1922 capital punishment was abolished in Queensland.

During the period 1861 to 1880 the annual average number of executions in Australia was 9, from 1881 to 1900 the average was 6, for the period 1901 to 1910 the figure was 4, from 1911 to 1920 it was 2, while the average for the last three years was 1.

§ 4. Prisons.

1. **Prison Accommodation and Prisoners, 1923.**—The table below shows the number of prisons in each State, the accommodation therein, and the number of prisoners in confinement at the end of 1923 :—

PRISON ACCOMMODATION AND PRISONERS, 1923.

State.	Number of Prisons.	Accommodation in—		Prisoners at End of Year.
		Separate Cells.	Wards.	
New South Wales	25	2,543(a)	..	1,339
Victoria	15	1,331	578	765
Queensland	10	583	374	279
South Australia	13	759	467	267
Western Australia	22	669	848	226
Tasmania	2	145	5	79
Northern Territory	1	..	48	2
Total	88	6,030	2,320	2,957

(a) Total accommodation.

The figures refer to prisoners under sentence, and are exclusive of aborigines.

2. Prisoners in Gaol, 1919 to 1923.—The number of prisoners in gaol at the 31st December in each of the years 1919 to 1923 is given below. As stated above, the figures refer to prisoners under sentence, and are exclusive of aborigines. A separate line is added in each instance showing the proportion per 10,000 of the population.

PRISONERS IN GAOL, 1919 TO 1923.

State.		1919.	1920.	1921.	1922.	1923.
New South Wales	{ Number ..	895	1,128	1,273	1,373	1,339
	{ Proportion	4.5	5.4	6.0	6.4	6.1
Victoria	{ Number ..	665	700	733	719	765
	{ Proportion	4.5	4.6	4.8	4.6	4.8
Queensland	{ Number ..	279	275	309	331	279
	{ Proportion	3.9	3.7	4.1	4.2	3.5
South Australia	{ Number ..	222	229	252	265	267
	{ Proportion	4.7	4.7	5.1	5.2	5.2
Western Australia	{ Number ..	158	167	211	196	226
	{ Proportion	4.9	5.1	6.3	5.8	6.5
Tasmania	{ Number ..	72	63	95	62	79
	{ Proportion	3.5	3.0	4.5	2.9	3.7
Northern Territory	{ Number ..	3	3	4	4	2
	{ Proportion	6.4	7.1	10.2	10.9	5.5
Commonwealth	{ Number ..	2,294	2,565	2,877	2,950	2,957
	{ Proportion	4.4	4.8	5.3	5.3	5.2

The proportion to population of prisoners in gaol under sentence has risen by about 18 per cent. for Australia during the last five years, but, if the comparison be carried farther back, the position is seen to be more favourable, the proportion in 1891 being as high as 16 per 10,000.

3. Improvement of Penological Methods.—(i) *New South Wales.* During recent years Australia, in common with most other civilized countries, has introduced considerable modifications and improvements in methods of prison management. Under the old system, punishment partook more or less of the character of reprisal for wrongdoing, and the idea of constituting the prison as a reformatory agency was in the background. But in recent years there has been an earnest attempt at effecting a moral reformation in the unfortunates who lapse into crime. This aspect of prison management has been specially prominent in New South Wales. A short account of the reorganization of the prison system in this State appears in preceding Year Books (see No. V., p. 922), but considerations of space preclude its repetition here. At the present time it is found that good results have followed the principles of scientific classification and restricted association of prisoners, together with the provision of separate institutions for the treatment of inebriates. Special efforts are put forward to provide reproductive work of a regular and intelligent nature, and for the year 1923 the value of the prisoners' labour amounted to £63,000, as compared with £35,000 in 1913. At the chief penitentiaries for males and females in the metropolis, a careful classification of prisoners is carried out, and provision is made for the treatment of special cases at some of the larger country gaols. Young first offenders are employed at the Emu Plains Prison Farm, and first offenders over the age of 25 years are drafted to the Prisoners' Afforestation Camp at Tuncurry, on the Manning River. This institution, which was opened in 1911, has given very satisfactory results. The total area set apart for afforestation is 3,380 acres, of which about 1,300 acres have been planted. About 150,000 pine seedlings are raised each year, and many thousands of trees, some up to 40 feet in height, are flourishing. The Shaftesbury Inebriate Institution was established in 1915 for the treatment of non-criminal inebriates, and in the following year provision was made for the accommodation and treatment of voluntary paying guests. In many instances prisoners received into the gaols are found to be suffering from contagious diseases, and, under the Prisoners Detention Act such persons may be detained until cured.

Amongst other improvements introduced during the last few years were the relieving of the monotony of non-working hours at week-ends by the provision of concerts, lectures, and suitable picture shows at the principal gaols, by more open-air exercise on Saturday afternoons and Sundays, and by the supply of a greater variety of interesting books and magazines to the prison libraries. Prisoners are encouraged to take up courses of study likely to be of service to them on their discharge, and, within reason, the text-books required are purchased for their use. As the Comptroller-General points out, these changes have been brought about, not from sympathy with the criminal, but as ordinary necessities to the wholesome functioning of the mind.

In his Report for the year 1923 the Comptroller states that many of the younger short-sentenced prisoners are more ignorant than vicious, and could be greatly benefited if detained long enough to be given educational and industrial training, followed by an after-care system under which suitable employment and sympathetic supervision would be provided.

In 1902 the system of finger-print identification of criminals was introduced, and in the following year bureaux were established in the various States for the exchange of records. Very successful results have attended the introduction of the system.

Allusion may be made here to the excellent work performed by the Prisoners' Aid Association, which has branches in the country towns where there are prisons. Members of the organization meet prisoners on their discharge, help in restoring hopeful cases to reputable relatives and friends, assist in obtaining situations, and generally maintain a friendly supervision over those in need of assistance.

(ii) *Victoria.* Space will not permit of more than a passing reference to the improvements brought about in prison management in the other States. In Victoria there is an excellent system of classification and allocation of prisoners in various grades to different gaols, while at the important penal establishment at Pentridge careful segregation into several classes is carried out. First offenders are placed in the "special" division, and it is stated that out of 911 prisoners in this class discharged from Pentridge during the decade ending in 1923 only 96 are known to have been reconvicted. In common with the other States the latest humane methods of accommodation and prison treatment have for some time been employed. An afforestation camp known as McLeod Settlement, French Island, was opened in 1916, and at the 31st December, 1923, there were 29 inmates. In addition to the work of afforestation, portion of the land has been laid down in crops, and some attention given to poultry and pig-keeping. It is stated that the experiment has resulted in improvement, both in demeanour and physique of prisoners, and in many cases has led to a return to honest citizenship. A farm has been established about 3 miles from the prison at Castlemaine with provision for 10 inmates, while others are taken to and fro daily. The number in confinement at the end of December, 1923, was 37. The orchard planted in connexion with the farm contains about 1,000 fruit trees. Provision has been made for practical instruction in carpentering and other work which will help in securing employment for prisoners on release.

Under the Venereal Diseases Act, prisoners where necessary receive medical treatment, and after release the treatment where required is continued outside the prison at places gazetted by the Health Department. Provision is also made for dental attention where necessary, the treatment being free if the prisoner is unable to pay or to make arrangements for payment.

Aid is given to discharged prisoners by the Salvation Army and by various church organizations and welfare committees.

(iii) *Queensland.* Queensland prisons have been considerably modernized during the last few years. Amongst recent reforms may be mentioned the provision of a separate institution at Brisbane for long-sentence prisoners, and the extension of the principle of classification and separation. Juvenile offenders, i.e., those between the ages of 16 and 21 years, are kept apart from other prisoners and treated in accordance with the latest reformatory methods. Many of the prisoners received both in the adult and junior stage come from the ranks of the idle, the thriftless, and the unskilled, and efforts are made

to teach these some useful calling, and to help them to form habits of industry. The penal establishment at St. Helena has been converted into a farm colony, and well-conducted prisoners receive special treatment there during the latter stages of their sentences. Greater facilities have been provided for the instruction of prisoners in trades which will afford them a means of earning a livelihood on their release, and the prison libraries have been replenished with useful and interesting literature. The cells in the principal prisons have been provided with lights, and prisoners are allowed to read and study up to a reasonable hour at night. Under the provisions of the Health Act, prisoners suffering from venereal disease may be detained until danger of infection has ceased.

Excellent work in aid of discharged prisoners is carried on by the Salvation Army, while the "William Powell Home," through its secretary, renders valuable service. In the Report for the year 1923 attention is again drawn to the need of an organized State system of assisting released prisoners.

(iv) *South Australia.* The present system of gaol administration was drafted mainly on English and European lines by the late W. R. Boothby, C.M.G., and has since been as far as possible adapted to modern penological procedure. At the Yatala Labour Prison, which is the largest in the State, the number in confinement on the 31st December, 1923, was 141. The prisoners are graded into three classes—first offenders, second offenders, and old offenders, the various classes being kept apart. The Adelaide gaol, which had 59 prisoners in confinement at the end of 1923, is the next in point of importance. Provision is made for the special treatment of inebriates at the Adelaide and Gladstone gaols.

Various religious organizations devote attention to the periodical visiting of prisoners in the gaols, while fine work is done by the Prisoners' Aid Association in helping released prisoners to obtain employment, or return to their homes in other States.

(v) *Western Australia.* A Royal Commission in 1911 recommended the adoption of various reforms in connexion with the prison system of Western Australia. The bulk of these were carried out, and included, amongst other things, an extension of the principle of separate treatment, improvement in prisoners' dietary scale, more satisfactory arrangements in regard to remission of sentences, and better conditions in regard to hours of labour, leave of absence, etc., for the staff. Amongst other improvements introduced may be mentioned the grant of an eight hours' day to officers, enlargement and improved hygiene of cells, additional library facilities, assistance to discharged prisoners by provision of railway passes and monetary aid, appointment of committees to look after the welfare of discharged prisoners, and the remodelling of the "mark" system. Under the Prisons Act Amendment Act of 1918 a portion of Fremantle Prison was set aside as a reformatory prison in 1919, and first offenders are kept separate from other prisoners. It is pointed out, however, that reformatory treatment is greatly hampered by the lack of a suitable institution away from the ordinary gaol surroundings. The Prison Gate Committee affords assistance to discharged prisoners by finding work and helping in other ways.

(vi) *Tasmania.* The number of convicted prisoners in confinement in Tasmanian gaols on the 30th June, 1923, was 69, of whom 67 were confined in the penal establishment at Hobart and 2 at the Launceston gaol. There were no prisoners in the country gaols. The completion of alterations to the Hobart gaol has facilitated the classification of offenders, and afforded greater opportunities for teaching trades. Youthful offenders are kept apart from ordinary prisoners.

4. *The Psychology of Crime.*—The Director of the State Psychological Clinic at Hobart recently stated that an examination of the prisoners in Hobart Gaol showed that nearly two-thirds were "deviates" from the normal, and he stressed the necessity for devising means for the discovery and possible correction of abnormal tendencies in childhood. He alluded also to the connexion between brain development and mental development and pointed out that in Hobart Gaol 84 per cent of the defectives were small-headed.

§ 5. Civil Courts.

1. Lower Courts.—The transactions of the lower courts on the civil side during each of the last five years are given in the table hereunder. As pointed out previously the jurisdiction of the courts is by no means uniform in the various States.

LOWER COURTS.—CIVIL CASES, 1919 TO 1923.

State.		1919.	1920.	1921.	1922.	1923.
New South Wales	{ Cases No.	31,847	34,475	37,557	38,828	48,760
	{ Amount £	92,853	111,531	145,176	163,803	198,558
Victoria ..	{ Cases No.	34,841	38,300	45,319	47,140	58,502
	{ Amount £	155,009	158,198	202,606	295,697	413,417
Queensland	{ Cases No.	9,289	10,428	14,339	16,023	18,329
	{ Amount £	56,555	58,476	84,277	122,684	155,314
South Australia	{ Cases No.	14,600	18,030	20,334	23,030	25,839
	{ Amount £	58,647	73,505	103,715	123,569	142,217
Western Australia	{ Cases No.	11,990	12,306	15,240	15,991	16,649
	{ Amount £	43,601	46,765	63,162	71,457	76,208
Tasmania ..	{ Cases No.	4,325	4,954	1,442	7,246	7,879
	{ Amount £	30,537	34,329	36,571	59,137	57,014
Total	{ Cases No.	106,892	118,493	134,231	148,258	175,958
	{ Amount £	437,202	482,804	635,507	836,347	1,042,728

The figures just given represent the returns from Petty Sessions Courts in New South Wales and Victoria, the Petty Debts Courts in Queensland, the Local Courts of South Australia and Western Australia, and the Courts of Requests in Tasmania.

2. Superior Courts.—In the next table will be found the transactions on the civil side in the Superior Courts during each of the years 1919 to 1923.

The New South Wales returns refer to the total amounts sued for, and not the sums actually awarded after trial in the District Courts, and are exclusive of judgments signed in the Supreme Court, for which the amount is not available.

SUPERIOR COURTS.—CIVIL CASES, 1919 TO 1923.

State.		1919.	1920.	1921.	1922.	1923.
New South Wales	{ Causes No.	933	1,148	1,344	1,386	1,557
	{ Amount £	a333,539	a377,419	a475,816	a500,862	a578,774
Victoria ..	{ Causes No.	661	760	906	863	996
	{ Amount £	100,200	122,840	226,736	213,597	237,145
Queensland	{ Causes No.	172	225	231	187	245
	{ Amount £	44,567	19,707	32,513	21,914	17,645
South Australia	{ Causes No.	20	39	52	55	60
	{ Amount £	3,491	16,938	5,673	10,300	3,923
Western Australia	{ Causes No.	138	174	288	195	205
	{ Amount £	26,757	28,890	54,339	40,119	34,207
Tasmania ..	{ Causes No.	237	145	246	474	525
	{ Amount £	29,808	14,507	13,651	28,952	30,127
Total	{ Causes No.	2,161	2,491	3,067	3,160	3,588
	{ Amount £	538,362	580,301	808,728	815,744	901,821

(a) Exclusive of judgments signed, Supreme Court, the amount not being recorded.

3. *Divorces and Judicial Separations.*—The number of divorces and judicial separations in each State during the period 1919 to 1923 is shown below. The figures refer in the case of divorces to decrees made absolute in each year and include decrees for nullity of marriage.

DIVORCES AND JUDICIAL SEPARATIONS, 1919 TO 1923.

State.	1919.		1920.		1921.		1922.		1923.	
	Divorces.	Judicial Separations.	Divorces.	Judicial Separations.	Divorces.	Judicial Separations.	Divorces.	Judicial Separations.	Divorces.	Judicial Separations.
New South Wales ..	427	7	556	11	789	13	684	9	739	13
Victoria ..	346	2	373	2	388	1	376	2	429	2
Queensland ..	25	1	45	1	56	2	47	..	75	2
South Australia ..	30	..	32	2	88	1	76	..	90	..
Western Australia ..	45	..	29	..	22	..	42	1	69	..
Tasmania ..	6	2	18	..	40	..	33	..	29	..
Northern Territory ..	..	..	..	..	..	..	..	..	..	..
Total ..	879	12	1,053	16	1,383	22	1,258	12	1,431	17

The average annual number of divorces and judicial separations in Australia at decennial periods from 1871 to 1920 is as follows:—

DIVORCES AND JUDICIAL SEPARATIONS.—AUSTRALIA, 1871 TO 1920.

	1871–1880.	1881–90.	1891–1900.	1901–10.	1911–20.
Averages ..	29	70	358	401	707

The bulk of the divorces and judicial separations refer to New South Wales and Victoria, the Acts of 1899 and 1889 in the respective States having made the separation of the marriage tie comparatively easy. In some statistical works it is customary to compare the divorces in any year with the marriages in the same year. The comparison is, however, quite valueless, as there is no necessary connexion between the figures.

4. *Probates.*—The number of probates and letters of administration granted, together with the value of the estates concerned, are given below for each State for the period 1919 to 1923:—

PROBATES AND LETTERS OF ADMINISTRATION, 1919 TO 1923.

State.	1919.	1920.	1921.	1922.	1923.
New South Wales ..	{ Number 7,188 Value £ 17,131,131	{ 5,737 12,265,044	{ 5,461 13,895,765	{ 5,651 15,441,378	{ 6,281 16,429,860
Victoria ..	{ Number 7,404 Value £ 13,844,186	{ 5,837 14,672,239	{ 5,769 12,554,865	{ 5,445 12,641,263	{ 6,283 15,070,725
Queensland ..	{ Number 1,122 Value £ 3,733,964	{ 1,027 3,594,844	{ 1,130 4,030,379	{ 1,002 3,591,631	{ 1,073 3,594,467
South Australia ..	{ Number 2,310 Value £ 3,470,000	{ 1,844 3,831,914	{ 1,784 3,115,106	{ 1,786 3,683,202	{ 1,823 4,043,547
Western Australia ..	{ Number 1,353 Value £ 2,451,828	{ 948 1,438,192	{ 1,059 1,854,009	{ 942 970,214	{ 907 1,358,846
Tasmania ..	{ Number 564 Value £ 1,390,836	{ 517 1,095,536	{ 518 1,207,252	{ 545 1,211,764	{ 560 1,283,638
Northern Territory ..	{ Number 19 Value £ 23,890	{ (a) ..	{ 10 3,864	{ 27 5,411	{ 19 6,006
Total ..	{ Number 19,069 Value £ 42,015,835	{ 15,910 36,897,769	{ 15,731 36,670,330	{ 15,428 37,553,763	{ 16,955 41,787,089

(a) Not available.

5. *Bankruptcies.*—(i) *General.* The returns in bankruptcy during each of the last five years are given in the following table.

For several reasons comparisons drawn from these figures are of little value. In the first place, the statements of assets and liabilities are notably unsatisfactory, particularly in regard to the former. Then, again, there is wide dissimilarity in regard to the laws in force in the various States and the methods of procedure thereunder in connexion with bankruptcy. Further, there are no means of knowing how many persons in each State who were in a bankrupt condition made private arrangements with their creditors either personally or by intervention of a solicitor. The figures quoted in the table exclude private arrangements in Victoria, South Australia, and Western Australia, and the liquidations in Queensland and Tasmania.

BANKRUPTCIES, 1919 TO 1923.

State.		1919.	1920.	1921.	1922.	1923.
New South Wales	Number ..	316	344	394	481	668
	Liabilities £	323,222	204,594	311,900	440,856	659,314
	Assets £	189,920	139,550	108,457	251,185	282,657
Victoria ..	Number ..	207	186	300	322	414
	Liabilities £	184,041	154,658	180,014	349,118	323,540
	Assets £	130,328	53,229	92,018	139,016	152,602
Queensland ..	Number ..	144	118	150	148	204
	Liabilities £	68,291	73,853	65,603	90,790	109,211
	Assets £	26,863	57,904	18,760	42,012	55,186
South Australia	Number ..	59	60	67	110	137
	Liabilities £	78,888	81,610	121,987	153,987	173,632
	Assets £	63,724	54,502	96,658	102,738	116,333
Western Australia	Number ..	31	25	30	36	41
	Liabilities £	23,958	46,381	43,944	36,510	50,449
	Assets £	21,190	41,875	35,899	16,961	24,018
Tasmania ..	Number ..	..	..	6	1	4
	Liabilities £	..	..	1,829	1,170	3,148
	Assets £	..	..	1,599	..	535
Northern Territory	Number ..	1	..	..	2	2
	Liabilities £	115	..	..	175	141
	Assets £	7	..	..	..	40
Total ..	Number ..	758	733	947	1,100	1,470
	Liabilities £	678,515	561,096	725,307	1,077,606	1,319,435
	Assets £	432,032	347,060	411,421	601,912	631,370

(ii) *Deeds of Arrangement, etc.* The figures given above are, as explained, exclusive of private arrangements. For New South Wales the returns show that a composition was effected in 1 case only in 1923. In Victoria during 1923 the deeds of arrangement numbered 133, the declared liabilities and assets being £199,074 and £139,757 respectively. Liquidations under the Insolvency Act in Queensland numbered 8, the total liabilities and assets amounting to £20,812 and £13,616 respectively. In South Australia 157 compositions were arranged during the year. Under the Bankruptcy Amendment Act of 1898, 7 compositions, 6 schemes of arrangement, and 58 deeds of assignment were made in Western Australia. In Tasmania, 18 liquidations involving liabilities £11,530 and assets £4,183, and 13 compositions with liabilities £3,725 and assets £1,265, were arranged during 1923.

6. *High Court of Australia.*—Under the provisions of section 71 of the Commonwealth Constitution Act, the judicial power of the Commonwealth is vested in a Federal Supreme Court, called the High Court of Australia, and in such other courts as the Parliament creates or invests with federal jurisdiction. The Federal High Court possesses both original and appellate jurisdiction. The powers of the Court are defined in Chapter III. of the Constitution Act and in the Judiciary Acts of 1903–20. At present the Court consists of a Chief Justice and six other judges. Sittings of the Court are held in the capitals of the various States as occasion may require. The following statement shows the transactions of the High Court for the quinquennium 1919–23 :—

COMMONWEALTH HIGH COURT.—TRANSACTIONS, 1919 TO 1923.

Items.	1919.	1920.	1921.	1922.	1923.
I. ORIGINAL JURISDICTION.					
Number of writs issued	93	123	155	183	82
Number of causes entered for trial ..	8	20	24	30	15
Verdicts for plaintiffs	3	6	13	6	5
Verdicts for defendants .. ..	..	5	4	9	1
Otherwise disposed of	5	31	22	61	9
Amount of judgments	£1,730	£6,907	£15,403	£18,579	£5,525
II. APPELLATE JURISDICTION.					
Number of appeals set down for hearing ..	54	65	68	96	72
Number allowed	20	20	31	39	27
Number dismissed	25	31	24	48	35
Otherwise disposed of	9	14	13	9	10
III. AMOUNT OF FEES COLLECTED.					
Amount in each year	£502	£675	£742	£802	£586

During the year 1923 the Court dealt also with other matters as follows :—

Appeals from Assessments under the Taxation Assessment Acts ..	18
Special cases stated for the opinion of the Full Court	14
Applications for Prohibition	3
Applications under the Trading with the Enemy Act	1

7. Commonwealth Court of Conciliation and Arbitration.—A more or less detailed statement regarding the operation of this Court, which was established under the provisions of the Commonwealth Conciliation and Arbitration Act of 1904-21, will be found in Chapter XIII.

§ 6. Cost of Administration of Justice.

1. Expenditure by the States.—The table below shows the expenditure from Consolidated Revenue during each of the last five years in connexion with the administration of justice in each of the States. Expenditure on police and on prisons are given on separate lines. With regard to the figures quoted for "other" expenditure, a slight allowance has to be made for the fact that some extraneous expenditure has been included which it was found impossible to disentangle from the total, but the amount is in no instance large.

STATE EXPENDITURE ON JUSTICE, 1919 TO 1923.

State.		1919.	1920.	1921.	1922.	1923.
		£	£	£	£	£
New South Wales ..	Police	977,506	1,101,767	1,150,323	1,205,557	1,219,244
	Gaols	92,781	113,882	120,136	145,887	138,137
	Other	309,632	370,061	400,943	395,691	415,420
Victoria ..	Police	490,016	577,407	579,351	600,856	755,698
	Gaols	61,937	75,986	74,161	80,363	101,233
	Other	193,481	227,190	224,670	233,452	252,995
Queensland	Police	407,480	476,153	458,955	455,519	461,446
	Gaols	36,802	40,190	36,236	34,068	34,635
	Other	140,374	149,068	143,592	144,341	149,492
South Australia ..	Police	159,258	197,157	211,428	216,109	221,635
	Gaols	27,381	31,940	33,359	34,520	37,388
	Other	60,784	52,500	54,129	50,459	64,549
Western Australia ..	Police	171,832	186,717	184,245	181,893	185,945
	Gaols	28,669	30,417	28,715	27,440	26,102
	Other	83,546	97,779	89,987	91,605	99,250
Tasmania	Police	66,940	79,372	79,105	77,096	78,313
	Gaols	8,274	9,774	10,097	9,643	9,475
	Other	29,289	33,322	34,114	32,921	33,487
Northern Territory α	Police	11,435	12,970	15,520	16,011	16,070
	Gaols	2,663	3,857	4,171	4,403	4,148
	Other	1,925	3,396	3,289	2,664	2,611
Total	Police	2,284,467	2,631,543	2,678,927	2,753,041	2,938,351
	Gaols	258,507	306,046	306,875	336,324	351,118
	Other	819,031	933,316	950,724	951,133	1,017,804

(a) See 2, Federal Expenditure, next page.

The rise in expenditure during the last few years was due chiefly to increases in wages and salaries and heavier outlay on stores and supplies.

For the purposes of comparison the figures in the table above have been reduced to a population basis, and the results are given in the table following:—

STATE EXPENDITURE ON JUSTICE PER HEAD, 1919 TO 1923.

State.		1919.	1920.	1921.	1922.	1923.
		s. d.	s. d.	s. d.	s. d.	s. d.
New South Wales	Police	9 7	10 6	10 10	11 1	11 0
	Gaols	0 11	1 1	1 2	1 4	1 3
	Other	3 0	3 6	3 9	3 8	3 9
Victoria ..	Police	6 6	7 7	7 6	7 7	9 4
	Gaols	0 10	1 0	0 11	1 0	1 3
	Other	2 7	3 0	2 11	2 11	3 1
Queensland ..	Police	11 1	12 8	11 11	11 7	11 5
	Gaols	1 0	1 1	0 11	0 10	0 10
	Other	3 10	4 0	3 9	3 8	3 8
South Australia	Police	6 10	8 0	8 5	8 5	8 5
	Gaols	1 2	1 4	1 4	1 4	1 5
	Other	2 6	2 2	2 2	2 0	2 6
Western Australia	Police	10 6	11 3	11 0	10 7	10 6
	Gaols	1 9	1 10	1 9	1 7	1 6
	Other	5 1	5 11	5 4	5 4	5 7
Tasmania ..	Police	6 5	7 6	7 3	7 0	7 2
	Gaols	0 10	0 11	0 11	0 11	0 10
	Other	2 10	3 2	3 1	3 0	3 1
Northern Territory	Police	50 4	65 0	81 6	90 2	90 5
	Gaols	11 9	19 4	22 4	24 10	23 4
	Other	8 6	17 0	17 7	15 0	14 8
Total ..	Police	8 7	9 9	9 9	9 9	10 3
	Gaols	1 0	1 2	1 1	1 2	1 3
	Other	3 1	3 5	3 6	3 5	3 6

Owing to the smallness of the white population, large area to be policed, and cost of supplies, transport, etc., the figures for the Northern Territory must necessarily appear somewhat abnormal.

The total expenditure in connexion with the administration of justice in the various States has risen from 10s. per inhabitant in 1901 to 15s. in 1923. Police expenditure increased by 4s. 6d. per head, the average for gaols by 1d. per head, while the expenditure on courts and the remaining machinery of justice increased by 5d. per head during the period. Increased salaries and allowances, and the heavier cost of materials and equipment, were largely responsible for the rise in the rate per head during the last few years.

2. *Federal Expenditure.*—(i) *High Court.* With the exception of that for the Northern Territory, the expenditure shown in the foregoing tables is that incurred by the State Governments only, and does not include expenditure in connexion with the Federal High Court, which is given hereunder for the period 1918–19 to 1923–24.

EXPENDITURE ON FEDERAL HIGH COURT, 1918–19 TO 1923–24.

Year.			Amount.	Year.			Amount.
			£				£
1918–19	..	..	30,337	1921–22	..	..	33,776
1919–20	..	..	34,370	1922–23	..	..	35,458
1920–21	..	..	34,669	1923–24	..	..	35,654

(ii) *Other Expenditure.* Other items of expenditure during 1923–24 by the Commonwealth Attorney-General's Department include—Secretary's office, £25,774; Crown Solicitor, £19,478; Court of Conciliation and Arbitration, £13,228; Public Service Arbitrator, £3,956. Including the High Court expenditure, but excluding that in connexion with Patents and Copyright, the total expenditure by the federal law authorities in 1923–24 amounted to £120,135.

CHAPTER XI. PUBLIC BENEVOLENCE.

§ 1. Introductory.

1. *General*.—Charity and charitable effort in Australia may be classified under three headings, viz. :—(a) State; (b) public; (c) private. To the first belong all institutions wholly provided for by the State, such as the principal hospitals for the insane in the various States, the Government hospitals in Western Australia, and the Government asylums for the infirm in New South Wales. The second class comprises public institutions of two kinds, viz. :—(i) those partially subsidized by the State or State endowed, but receiving also private aid, and (ii) those wholly dependent upon private aid. To the former division belong such institutions as the principal metropolitan hospitals. In the latter are included institutions established and endowed by individuals for the benefit of the needy generally. All charitable movements of a private character are included in the third group. A more or less accurate statistical account is possible in classes (a) and (b), but in regard to (c) complete tabulation is, for obvious reasons, impossible.

No poor-rate is levied in Australia, and Government aid without return is required only for the aged and disabled. Moreover, although Old-age Pensions, Invalid Pensions, and Maternity Allowances are paid by the Commonwealth, the payments are looked upon rather in the light of a citizen's right than as a charity. Reference to these matters will be found in § 7 of Chapter VIII.

From time to time relief funds have been organized for famine-stricken countries in various parts of the world or for places where plague, flood, fire, or earthquake has shown the need of urgent relief. Special funds were also raised for persons disabled or bereaved through war. Complete statistical information in regard to these forms of charity is not, however, available. It may be mentioned that the daily Press frequently accepts the duty of collectorship in charity appeals. In regard to subscriptions to the various patriotic funds which were instituted in consequence of the war, the total for Australia is estimated to exceed £12,500,000 sterling.

§ 2. The Larger Charities of Australia.

1. *Hospitals*.—(i) *General*. All the State capitals have several large and well-equipped hospitals, and there is at least one in every important town. In large centres there are hospitals for consumptives, women, children, infectious diseases, incurables, etc.

(ii) *Principal Hospitals in each State*. The particulars given herein refer to general hospitals, and include all institutions affording general hospital relief.

(a) *New South Wales*. A Government hospital, with a staff of 33 medical officers and accommodation for about 700 patients, is established at Little Bay, near Sydney. Altogether, there are four hospitals for women, one for women and children, and three for children in the metropolis. The Royal Prince Alfred Hospital, with a medical staff of 89, and with 584 beds, is the largest metropolitan subsidized institution. Amongst other large metropolitan hospitals may be mentioned the Sydney Hospital, with a medical staff of 67 and with 382 beds, St. Vincent's with 44 doctors and 220 beds, and Lewisham with 34 medical attendants and 275 beds. In extra-metropolitan areas the Waterfall Hospital for Consumptives, which is a Government institution, provides accommodation for 408 patients. The Newcastle Hospital has 180 beds and a medical staff of 25. At the Carrington Convalescent Home at Camden there is provision for 110 patients. The hospital in the Broken Hill district can accommodate 173. Upwards of 300,000 outpatients received treatment at the various hospitals.

(b) *Victoria*. There are several large metropolitan hospitals in Victoria. In 1922–23, the largest of these, the Melbourne Hospital, had 358 beds, attendances of outpatients in the twelve months were 193,884; the Alfred Hospital had 320 beds, outpatients' attendances numbered 78,603; the Austin Hospital for Incurables had 290 beds, St. Vincent's 126, and the Homeopathic 98. Amongst the country institutions, Bendigo had 222 beds, Geelong 217, and Ballarat 170.

(c) *Queensland*. Of the metropolitan hospitals, the largest is the Brisbane General, which can accommodate 361 patients. The Children's Hospital has 260 beds, the Diamantina 167, and the Mater Misericordiae 127. Ipswich Hospital, with 160 beds, is the largest of the country institutions, followed by Toowoomba with 148, Rockhampton

with 116, Townsville with 115, Bundaberg 110, Charters Towers 100, Maryborough 96, Cairns 84, Mackay 84, and Mt. Morgan 71.

(d) *South Australia.* Including the Consumptive Home and Infectious Diseases Block, the Adelaide Hospital can accommodate a total of 580 patients. The most important of the country hospitals are at Port Augusta, Port Pirie, and Wallaroo. The Adelaide Children's Hospital has 98 beds.

(e) *Western Australia.* Information regarding the capacity of the Western Australian hospitals is not available, but some idea of their comparative importance may be gained from the figures relating to cases treated. In the metropolis, 5,142 cases were treated at the Perth Hospital in 1923, and 1,774 at the Perth Children's Hospital. Of the country hospitals, Kalgoorlie returned 1,006 cases, Fremantle 1,027, Northam 575, and Wooroloo 492.

(f) *Tasmania.* There are well-equipped general hospitals in Hobart and Launceston. The former has a medical staff of 5 and can accommodate 225 patients, with additional verandah accommodation if required, and the latter has 226 beds and a medical staff of 4. Hospitals for women have been established in both centres, and there is a sanatorium for consumptives at Newtown. Outside the metropolitan area, the Devon Cottage Hospital has beds for 112 patients; the Lyell District Hospital can accommodate 45 patients, and there are other institutions in important country centres.

(g) *Northern Territory.* In addition to the hospitals at Darwin and Pine Creek, arrangements have been made for the supply of medicines and first aid to outlying stations.

(iii) *Number, Staff, and Accommodation, 1923.* Details regarding the number of hospitals, staffs, and accommodation for the year 1923 are given in the appended table:—

GENERAL HOSPITALS.—NUMBER, STAFFS, AND ACCOMMODATION, 1923.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N. Ter.	Total.
Number of Hospitals—								
Government	4	..	4	12	22	3	4	49
Other	154	53	94	31	32	12	1	377
Total	158	53	98	43	54	15	5	426
Medical Staff—								
Males	1,035	100	237	143	56	25	1	1,615
Females								
Total	1,035	100	245	153	56	25	1	1,615
Nursing Staff and Attendants—								
Males	84	(a) 19	333	95	140	3	5	(a) 679
Females	2,753	(a) 886	1,569	768	631	208	10	(a) 6,825
Total	2,837	1,589	1,902	863	771	211	15	8,188
Accommodation—								
Number of dormitories, wards, etc. ..	1,159	439	633	308	238	147	11	2,935
Capacity, in cubic feet ..	8,949,898	4,837,220	4,263,602	2,150,186	2,555,829	965,000	120,000	23,841,735
Number of beds, etc. ..	7,772	3,682	3,953	1,647	1,762	729	45	19,590
Cubic feet to each bed ..	1,151	1,314	1,078	1,306	1,450	1,324	2,667	1,217

(a) Victorian figures, exclusive of 662 nursing staff and 22 dispensing staff, sexes not available.

(iv) *Patients Treated.* The table hereunder furnishes particulars respecting patients treated for the year 1923. In addition to the accommodation provided in the ordinary wards, a considerable amount of accommodation for certain classes of cases is furnished in out-door or verandah sleeping places, and this can be augmented; full particulars in connexion with these are not available. So far as the returns show, there were 975 out-door beds in New South Wales, 117 in South Australia, 60 in Tasmania, and 30 in the Northern Territory. These figures are not included in the totals given in the table above.

GENERAL HOSPITALS.—PATIENTS TREATED, 1923.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N. Ter.	Total.
Indoor Relief : Persons Treated—								
Males	54,482	18,985	30,850	9,293	10,011	5,898	178	129,697
Females	51,664	15,194	18,965	8,832	7,074	5,834	79	107,642
Total	106,146	34,179	49,815	18,125	17,085	11,732	257	237,339
Inmates at beginning of Year—								
Males	2,738	1,172	1,473	561	568	231	24	6,767
Females	2,400	1,003	813	420	286	233	17	5,172
Total	5,138	2,175	2,286	981	854	464	41	11,939
Admissions and Re-admissions during Year—								
Males	51,744	17,813	29,377	9,680	9,443	5,667	148	123,872
Females	49,264	14,191	18,152	9,244	6,788	5,601	56	103,296
Total	101,008	32,004	47,529	18,924	16,231	11,268	204	227,168
Discharges—Recovered :								
Males	37,270	15,290	26,644	5,952	4,510	5,223	100	94,989
Females	39,617	12,785	16,697	6,583	4,333	5,297	40	85,352
Total	76,887	28,075	43,341	12,535	8,843	10,520	140	180,341
Relieved :								
Males	8,940	<i>b</i>	<i>b</i>	2,295	3,297	<i>b</i>	48	<i>c</i>
Females	5,933	<i>b</i>	<i>b</i>	1,672	1,632	<i>b</i>	29	<i>c</i>
Total	14,873	<i>b</i>	<i>b</i>	3,967	4,929	<i>b</i>	77	<i>c</i>
Unrelieved :								
Males	1,606	53	670	570	277	61	..	3,237
Females	1,257	33	449	399	144	72	..	2,354
Total	2,863	86	1,119	969	421	133	..	5,591
Not stated :								
Males .. ..	..	549	..	73	..	9	..	631
Females .. ..	..	340	..	76	..	12	..	428
Total .. ..	..	889	..	149	..	21	..	1,059
Deaths—								
Males	3,766	1,853	1,816	757	751	344	14	9,301
Females	2,412	1,050	867	469	322	214	2	5,336
Total	6,178	2,903	2,683	1,226	1,073	558	16	14,637
Inmates at end of Year—								
Males	2,900	1,240	1,527	594	608	261	10	7,140
Females	2,445	986	838	465	357	239	2	5,332
Total	5,345	2,226	2,365	1,059	965	500	12	12,472
Average Daily Number Resident—								
Males	6,045	2,160	2,627	621	670	267	15	13,528
Females				501	364	254	4	
Total	6,045	2,160	2,627	1,122	1,034	521	19	13,528

(a) Including relieved.

(b) Included in recovered.

(c) Not available.

(v) *Summary for Five Years, 1919 to 1923.* Returns for the last five years of the number of hospitals in Australia, admissions, patients treated, deaths, and expenditure, are given in the following table. Figures for general hospitals only are tabulated, since the working of "special" institutions is not properly comparable with those which treat every class of case.

GENERAL HOSPITALS.—SUMMARY, AUSTRALIA, 1919 TO 1923.

Particulars.	1919.	1920.	1921.	1922.	1923.
Number of institutions ..	393	393	404	424	426
Number of beds ..	17,390	17,890	18,342	18,969	19,590
Admissions during year ..	193,920	202,053	205,072	209,018	227,168
Indoor patients treated ..	202,929	211,332	215,278	218,209	237,339
Deaths ..	15,758	14,475	13,969	13,485	14,637
Expenditure ..	£ 1,798,297	2,099,601	2,332,116	2,441,075	2,612,764

In addition to those admitted to the institutions, there are large numbers of out-patients. The exact number of these cannot be given, but a rough estimate of distinct cases places the total at about 300,000.

(vi) *Revenue and Expenditure.* The revenue and expenditure for the year 1923 were as follow :—

GENERAL HOSPITALS.—REVENUE AND EXPENDITURE, 1923.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N. Ter.	Total.
	£	£	£	£	£	£	£	£
Revenue—								
Fees of patients, etc.	156,297	68,239	63,241	53,798	49,449	29,124	537	420,685
Government grants	509,797	74,994	241,051	160,358	90,722	42,755	3,200	1,122,877
Other ..	499,805	298,014	191,824	41,136	48,197	9,822	..	1,088,798
Total ..	1,165,899	441,247	496,116	255,292	188,368	81,701	3,737	2,632,360
Expenditure—								
Salaries and Main- tenance ..	841,707	325,397	457,700	194,087	176,832	55,081	6,145	2,056,949
Buildings ..	218,025	52,234	45,576	50,042	1,355	3,012	480	370,724
Other ..	117,641	3,519	23,089	9,838	8,027	22,977	..	185,091
Total ..	1,177,373	381,150	526,365	253,967	186,214	81,070	6,625	2,632,360

2. *Benevolent and Destitute Asylums.*—(i) *General.* There has been a great increase in recent years in the amount of aid provided for the aged. Two elements, each of them independent of the growth of population, have influenced this increase. One is, that the general age of the community has advanced—the large flow of immigration of sixty and seventy years ago having been mostly of persons in the prime of life; the other is the increased regard paid in all British communities to the well-being of the helpless. In Australia numerous establishments have been founded for the housing and protection of persons no longer able to care for themselves. The institutions are supported by Government and municipal aid, public subscriptions, charity performances, bequests, etc.; and in many cases relatives of indigent and afflicted persons contribute to their maintenance.

The impossibility of an entirely satisfactory statistical tabulation in regard to all forms of charitable aid is especially marked in the case of benevolent institutions, since the conditions under which they have been established in the different centres in Australia have resulted in differences in the classes of cases treated by them. For example, in Western Australia the Home for Destitute Women includes a maternity ward, for which the statistics are not separately kept. Since the chief function of the

institution is aid to the destitute, it has been included amongst benevolent asylums. In Victoria, although nine of the hospitals are also benevolent asylums, they have been classed under hospitals. In South Australia, the Destitute Asylum includes lying-in and children's departments.

(ii) *Principal Institutions.* The principal institutions of this nature in each State are as follows:—

(a) *Government Asylums for the Infirm, New South Wales.* There are five asylums for the infirm maintained by the Government—four for men and one for women. Rookwood, the largest of these, had in 1922 an average number resident of 1,416, Newington 704, and Liverpool 645. At the Cottage Homes, situated at two separate localities in Parramatta, the average number resident was about 485. The State Labour Depot and Refuge at Randwick had 92 inmates during 1922.

(b) *Benevolent Asylums, Victoria.* Besides the asylums attached to hospitals, there are eight institutions in Victoria. In 1922–23, the average daily number of indoor patients was 1,944, and there were 349 distinct cases of outdoor relief.

(c) *Benevolent Asylums, Queensland.* There are four institutions in Queensland, with 1,259 beds. The most important of these is at Dunwich (Stradbroke Island) with 1,141 beds, while there are small institutions at Nundah, Rockhampton, and Toowoomba. At the end of 1923 the inmates of the four institutions numbered 1,163.

(d) *Destitute Asylum, South Australia.* Outside of hospitals and lunatic asylums the destitute of South Australia are dealt with and relieved at the Destitute Asylum and the Aged Men's Home, Beaumont. The former institution includes a children's department. In the asylum the number of inmates at the end of 1923 was 403; in the Beaumont Home it was 67.

(e) *Homes for the Destitute, Western Australia.* There are two homes in Western Australia supported by public funds. The Old Men's Home at Claremont had 571 inmates at the end of 1923, and the Women's Home, Fremantle, which receives children also, had 95 adult inmates.

(f) *Charitable Establishments, Tasmania.* There are two principal Government charitable establishments in Tasmania. The New Town Infirmary and Consumptive Home, with 230 beds, had 219 inmates on 30th June, 1924, and the Home for Invalids, Launceston, with 27 beds, had 27 inmates on the same date.

(iii) *Revenue and Expenditure.* Details regarding revenue and expenditure for the year 1923 are given in the following table:—

BENEVOLENT ASYLUMS.—REVENUE AND EXPENDITURE, 1923.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
	£	£	£	£	£	£	£
Revenue—							
Government aid ..	147,394	19,991	42,059	42,361	12,358	10,148	274,311
Municipal aid ..		783	..	..	..	..	783
Public subs., legacies, etc.	3,639	25,790	2,389	25	..	..	31,843
Fees ..	26,185	20,128	..	1,038	10,762	4,246	62,359
Other ..	5,286	7,754	265	2,532	..	1,203	17,040
Total ..	182,504	74,446	44,713	45,956	23,120	15,597	386,336
Expenditure—							
Buildings ..	4,649	873	113	464	..	274	6,373
Maintenance..	170,463	59,528	44,193	38,432	23,120	10,275	346,011
Other ..	6,818	1,055	414	7,144	..	5,048	20,479
Total ..	181,930	61,456	44,720	46,040	23,120	15,597	372,863

3. **Orphanages, Industrial Schools, etc.**—(i) *General.* The organization of charitable effort varies greatly in regard to orphans and waifs. In many institutions, shelter and some form of industrial training are offered to destitute children of all classes whether orphans or not, while some of those styled orphanages do not confine their relief strictly to orphans. The expenditure on orphanages in 1923 was approximately £240,000.

(ii) *Principal Institutions.* The principal institutions in each State are as follows :—

(a) *New South Wales.* The care of destitute and neglected children is entrusted to the State Children's Relief Board, whose officers supervise the welfare of the children and the treatment of them by those to whom they are boarded out. Provision is made for instruction in various trades and callings.

There are also orphanages, farm homes, country homes for children, etc., with upwards of 2,000 children under care.

There are several reformatory and industrial schools maintained by the State. At the Parramatta Industrial School for Girls, to which a Training Home is attached, there were on 31st December, 1922, 167 inmates. At the Farm Home for boys, Gosford, there were 70 inmates at the end of 1922.

(b) *Victoria.* There are ten orphanages in Victoria, with 1,687 beds. The daily average of the inmates was 1,677 in 1922–23. The expenditure in the same year was £47,921.

At the end of 1923 there were two industrial and four reformatory schools in the State. Of these, one in each class is wholly controlled by the Government, being used merely as a receiving and distributing dépôt. The children are sent thence to situations, foster homes, or other institutions dealing with State wards. The other schools are under private management, receiving an allowance for State wards. Many of the reformatory children are placed with friends, or licensed out.

(c) *Queensland.* There are twelve orphanages in Queensland. The number under care on 31st December, 1923, was 1,000, and the expenditure for the year, £27,732.

There are also eight industrial and reformatory schools, which had 178 boys and 59 girls under detention at the end of 1923.

(d) *South Australia.* The State Children's Department exercises a supervision over the probationary and industrial schools and the reformatories. The total number of admissions into these institutions in 1923–24 was 232. The number of inmates on the 30th June, 1924, was 252; in addition to which 1,531 were placed out, or had been adopted or apprenticed; and 1,800 children were placed with licensed foster-mothers and others under the supervision of the Department. There were no deaths amongst children in industrial schools and reformatories, and of those placed out and in other institutions five died.

There are three orphan asylums. The number under care during 1923 was 306, and the number of inmates on 31st December, 1923, was 267. There were no deaths during the year, and the expenditure amounted to £4,777.

(e) *Western Australia.* In Western Australia there were, at 30th June, 1924, thirteen institutions classed as orphanages, industrial schools, etc., containing 435 boys and 308 girls. There were also 10 boys and 19 girls at the Government Receiving Dépôt at the 30th June, 1924.

(f) *Tasmania.* There are four industrial schools and one orphanage under benevolent institutions in the State. Admissions in 1922–23 numbered 39, and average daily number of inmates was 187. No deaths occurred during the year. The expenditure was £7,247.

(iii) *Transactions of State Departments.* The following table summarizes the transactions in 1923 of State Departments for the relief of neglected children :—

STATE RELIEF OF NEGLECTED CHILDREN.—SUMMARY, 1923.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
Number of children in institutions, boarded out, or on probation—							
Males	2,795	3,500	4,061	953	514	276	12,099
Females	2,410	2,860	3,578	830	473	208	10,359
Total	5,205	a 6,360	7,639	1,783	987	484	22,458
Number of children boarded out with their own mothers—							
Males	12,039	7,641	2,496	69	68	..	24,806
Females			2,374	40	79	..	
Total	12,039	7,641	4,870	109	147	..	24,806
Total	17,244	a 14,001	12,509	b 1,892	1,134	484	d 47,264
	£	£	£	£	£	£	£
Gross cost to State of children's relief ..	443,431	314,045	189,323	49,016	c 26,233	13,141	1,035,189
Receipts, from parents' contributions, etc. ..	12,560	14,589	12,158	5,715	5,435	970	51,427
Net cost	430,871	299,456	177,165	43,301	c 20,798	12,171	983,762

(a) Excluding 30 incapacitated children maintained by the State. (b) Excluding 1,800 children (870 males and 930 females) placed with licensed foster-mothers and others. (c) Maintenance State children only. (d) See notes (a) and (b).

4. *Lepers.*—Lazarets for the treatment of lepers have been established in New South Wales (Little Bay); Queensland (Peel Island, near Brisbane, and Dayman Island, Torres Strait); and the Northern Territory (Mud Island). Two deaths occurred in the latter in the year 1921–22. Quarantine and isolation stations have also been used for the segregation of patients. Up to 1915, 545 cases of leprosy had been recorded in Australia. Later information is not available, but between the calendar years 1916 to 1923 there were 48 deaths from the disease. At the end of 1922 there were 21 lepers in the Little Bay lazaret.

5. *Hospitals for the Insane*—(i) *General.* The method of compiling insanity statistics has been fairly uniform throughout the States, but differences in diagnosis of the early stages of the disease introduce an element of uncertainty which considerably affects the value of comparisons.

(ii) *Hospitals, Staff, etc., 1923.* Particulars regarding the number of institutions, medical and nursing staff, and accommodation are given in the appended table for the year 1923:—

HOSPITALS FOR THE INSANE.—NUMBER, STAFFS, ACCOMMODATION, 1923.

Particulars.	N.S.W.	Vic.(a)	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
Number of Institutions—							
Government	9	9	3	2	3	1	27
Private	2	(b) 5	..	..	1	..	8
Total	11	14	3	2	4	1	35
Medical Staff—							
Males	24	23	6	4	3	2	62
Females	1	..	1	1	..	..	3
Total	25	23	7	5	3	2	65
Nursing Staff and Attendants—							
Males	673	586	241	94	128	60	1,782
Females	596	545	187	95	70	68	1,561
Total	1,269	1,131	428	189	198	128	3,343
Accommodation—							
Number of dormitories ..	(f)	1,352	565	507	44	407	(g)
Capacity, in cubic feet ..	(f)	3,681,419	2,046,916	894,163	714,714	878,590	(g)
Number of beds	(c) 6,840	5,477	2,873	1,317	1,186	610	(c) 18,303
Cubic feet to each bed ..	{ (d) (c) 600 (e) (c) 1,000 }	672	712	679 {	(e) 605 (g) 1,684 }	1,440	(f)

(a) Exclusive of Receiving House, Royal Park, and of the Receiving Wards at Bendigo and Geelong Hospitals. (b) There are five private licensed houses in Victoria, in which there were 97 cases at the end of 1923. Complete figures for these private asylums are not available. (c) Government hospitals only. (d) Ordinary dormitory. (e) Hospital dormitory. (f) Information not available. (g) Private hospitals.

(iii) *Patients, 1923.* Information regarding patients treated, deaths, etc., for the year 1923 is given in the table hereunder:—

HOSPITALS FOR THE INSANE.—PATIENTS, DEATHS, ETC., 1923.

Particulars.	N.S.W.	Vic.(a)	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
Admissions and re-admissions during year—							
Males	774	470	313	208	82	49	1,896
Females	622	357	198	180	43	46	1,446
Total	1,396	827	511	388	125	95	3,342
Discharges—Recovered—							
Males	269	106	167	76	23	12	653
Females	266	98	111	70	13	18	576
Total	535	204	278	146	36	30	1,229
Relieved and unrelieved—							
Males	89	54	14	59	19	12	247
Females	72	55	11	51	16	10	215
Total	161	109	25	110	35	22	462

(a) Exclusive of inmates of the Receiving House, Royal Park, and of Receiving Wards attached to the hospitals at Bendigo and Geelong, and of five private licensed houses.

HOSPITALS FOR THE INSANE.—PATIENTS, DEATHS, ETC., 1923—*continued*.

Particulars.	N.S.W.	Vic.(a)	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
Absconders not retaken—							
Males	6	11	..	1	..	..	18
Females	1	..	..	..	..	..	1
Total	7	11	..	1	..	..	19
Deaths—							
Males	371	276	120	65	44	22	898
Females	201	198	61	42	21	12	535
Total	572	474	181	107	65	34	1,433
Number of patients on books at end of year—							
Males	4,479	2,932	1,797	934	734	305	10,931
Females	3,633	3,094	1,072	564	332	303	8,998
Total	8,112	6,026	2,869	1,248	1,066	608	19,929
Average daily number resident—							
Males	4,217	2,626	1,788	686	729	302	10,348
Females	3,245	2,750	1,015	555	340	298	8,203
Total	7,462	5,376	2,803	1,241	1,069	600	18,551
Number of patients on books at end of year per 1,000 of population—							
Males	4.00	3.64	4.20	2.58	3.88	2.78	3.73
Females	3.36	3.78	2.80	2.18	2.02	2.77	3.12
Persons	3.67	3.71	3.54	2.38	3.00	2.78	3.47
Average number of patients resident in hospitals for insane per 1,000 of mean population—							
Males	3.78	3.30	4.23	2.64	3.92	2.80	3.57
Females	3.03	3.40	2.68	2.16	2.10	2.78	2.94
Persons	3.41	3.34	3.49	2.40	3.07	2.79	3.26

(a) Exclusive of inmates of the Receiving House, Royal Park, and of Receiving Wards attached to the hospitals at Bendigo and Geelong, and of five private licensed houses.

In some States persons well advanced towards recovery are allowed to leave the institutions and reside with their relatives or friends, but they are under supervision and their names are kept on the books. The figures for admissions, etc., include absconders captured and re-admitted. Generally, very few escapees succeed in avoiding capture.

(iv) *Summary for Australia, 1919 to 1923.* The table hereunder gives a summary for hospitals for the insane in Australia for each of the five years 1919 to 1923. Licensed houses (except as regards expenditure) are included in the totals for New South Wales and Victoria, in the latter the figures are exclusive of reception houses, and observation wards in gaols:—

HOSPITALS FOR THE INSANE.—SUMMARY, AUSTRALIA, 1919 TO 1923.

Particulars.	1919.	1920.	1921.	1922.	1923.
Number of institutions (a)	35	35	35	36	35
Number of beds	17,308	17,468	17,224	18,047	18,303
Admissions	3,323	3,501	3,254	3,226	3,342
Discharged as recovered, relieved, etc.	1,565	2,302	1,723	1,648	1,691
Deaths	1,699	1,483	1,473	1,267	1,433
Expenditure	£ 1,116,676	1,414,055	1,398,148	1,303,907	1,401,459

(a) Exclusive of receiving wards at general hospitals, and including licensed houses for insane in Victoria.

(v) *Number of Insane, 1919 to 1923.* The proportion of insane, as well as the total number returned as under treatment, has changed very little during recent years. The next table gives the number of insane under official care in Australia and the proportion per 1,000 of population for the last five years.

INSANE PERSONS IN INSTITUTIONS, 1919 TO 1923.

State.	1919.	1920.	1921.	1922.	1923.
NUMBER.					
New South Wales ..	7,544	7,889	7,970	7,991	8,112
Victoria ..	5,846	5,830	5,842	5,997	6,026
Queensland ..	2,703	2,745	2,753	2,842	2,869
South Australia ..	1,187	1,194	1,190	1,224	1,248
Western Australia ..	1,148	1,166	1,104	1,079	1,066
Tasmania ..	578	578	584	599	608
Total ..	19,006	19,402	19,443	19,732	19,929
PER 1,000 OF POPULATION.					
New South Wales ..	3.70	3.77	3.75	3.93	3.67
Victoria ..	3.89	3.82	3.77	3.77	3.71
Queensland ..	3.66	3.65	3.58	3.61	3.54
South Australia ..	2.46	2.43	2.37	2.39	2.38
Western Australia ..	3.51	3.52	3.48	3.15	3.00
Tasmania ..	2.75	2.72	2.67	2.74	2.78
Australia ..	3.58	3.58	3.53	3.61	3.47

For the period embraced in the tables Victoria shows the highest rate of insanity, roughly 1 in 270 persons. It is stated that this is chiefly owing to the proportionately greater number of the aged in that State. On the other hand, in South Australia a considerably lower insanity rate has prevailed, averaging about 1 in 420, Tasmania being next with an average of about 1 in 360.

A more rational attitude towards the treatment of mental cases has resulted in a greater willingness in recent years to submit afflicted persons to treatment at an earlier stage. Hence an increase in the number of recorded cases does not necessarily imply an actual increase in insanity and the small increment in the numbers in the first of the immediately preceding tables is probably, if not solely, due to this circumstance.

(vi) *Causes of Insanity.* The proportion of causes of insanity to the total ascertained causes in Australia in the five years 1919 to 1923 shows that hereditary influence has been the chief factor, more than one-fifth of the total ascertained causes coming under this head. Domestic troubles, adverse circumstances, etc., have also been a fruitful source. Cases due to intemperance in drink range from one in nine to one in thirteen.

INSANITY.—PERCENTAGE OF CAUSES, AUSTRALIA, 1919 TO 1923.

Causes, Previous History, etc.	1919.	1920.	1921.	1922.	1923.
	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.
Domestic trouble, adverse circumstances, mental anxiety ..	8.4	9.3	10.6	12.6	11.4
Intemperance in drink ..	8.7	10.9	7.7	8.9	9.4
Hereditary influence, ascertained ; congenital defect, ascertained ..	21.1	23.7	21.2	21.8	22.9
Pregnancy, lactation, parturition and puerperal state, uterine and ovarian disorders, puberty, change of life ..	5.8	6.0	7.5	7.6	7.0
Previous attacks ..	12.4	12.5	11.5	12.4	13.6
Accident, including sunstroke ..	1.8	1.7	0.8	1.3	1.5
Old age ..	8.1	10.6	9.2	11.7	11.1
Venereal disease ..	(a)	7.1	5.6	3.3	5.2
Other causes ascertained ..	33.7	18.2	25.9	20.4	17.9
All ascertained causes ..	100.0	100.0	100.0	100.0	100.0

(a) Not available.

(vii) *Length of Residence in Hospital.* (a) *New South Wales.* Particulars are not available regarding the average length of residence in hospitals during the year of persons who died or were discharged. There are three State Reception Houses, where suspected persons are confined for observation, being subsequently either discharged or transferred to lunatic asylums. In one of the gaols, observation wards have been instituted with similar functions.

(b) *Victoria.* Particulars are not available as to the average length of residence in hospitals during the year of persons who died or were discharged. There are lunacy wards in two of the general hospitals; also a State receiving house where persons are placed for observation, and subsequently discharged or transferred to asylums.

(c) *Queensland.* The average residence in the institutions of those who died during the year was 8 years 123 days for males and 8 years 60 days for females; and of those who were discharged, 271 days for males and 1 year 25 days for females. There are three reception houses for observation of the insane.

(d) *South Australia.* The average residence of those who died was 6 years 237 days for males and 7 years 259 days for females; of those discharged, 1 year 48 days for males and 1 year 56 days for females.

(e) *Western Australia.* The period of residence of those who died during the year averaged about 6 years 270 days for males and 10 years 23 days for females; of those who were discharged, 2 years 135 days for males and 1 year 176 days for females.

(f) *Tasmania.* The period of residence of those who died was 7 years 300 days for males and 15 years 30 days for females; that of those discharged, 160 days for males and 1 year 330 days for females.

(viii) *Revenue and Expenditure, 1923.* The revenue of Government asylums is small in comparison with their cost, and consists chiefly of patients' fees. The proportion of expenditure borne by the State amounts to about 90 per cent.

HOSPITALS (GOVERNMENT) FOR THE INSANE.—FINANCES, 1923.

Particulars.	N.S.W. (a)	Victoria. (a)	Q'land.	S. Aust.	W. Aust.	Tasmania.	Total.
	£	£	£	£	£	£	£
Revenue (Exclusive of Government Grants)—							
Fees of Patients	73,133	35,296	24,664	15,531	9,273	7,639	165,536
Other	1,960	6,004	985	655	2,625	963	13,192
Total	75,093	41,300	25,649	16,186	11,898	8,602	178,728
Expenditure—							
Salaries	315,251	213,887	111,809	39,607	49,520	25,401	755,475
Maintenance	227,963	168,039	67,724	41,932	..	23,884	529,342
Buildings .. ..	..	33,128	3,803	3,948	..	773	41,652
Other	32,287	5,402	1,540	..	35,706	55	74,990
Total	575,501	420,456	184,876	85,487	85,226	49,913	1,401,459

(a) Year ended 30th June, 1924.

6. *Care of the Feeble-minded.**—(i) *General.* The Mental Deficiency Act of 1920, which came into operation in Tasmania in March, 1922, was the first legislation in Australia dealing with the feeble-minded. This Act was based on the British Act of 1913. In 1913 South Australia passed a Mental Deficiency Act relating to the insane, idiots and imbeciles, which is really a lunacy act, as it deals in part with low-grade defectives, and makes no distinction between mental disorder and mental deficiency. In 1925 Bills for Acts relating to the care of mental defectives were being prepared in New South Wales and Victoria.

* Information supplied by the Department of Public Health, Tasmania.

(ii) *Administration of the Tasmanian Act.* In Tasmania the Act is administered by a Mental Deficiency Board, which consists of the Director of Public Health as Chairman, the Director of the State Psychological Clinic, a medical practitioner with a knowledge of psychiatry, a representative of the Education Department, and a representative of the University of Tasmania. The examining work is under the direction of the State Psychological Clinic. The Act is the first British Statute to make legal recognition of the clinical psychologist. Provision is made for the ascertainment and registration of all defectives in the State, and for their education. The methods of treatment, care and protection, comprise (a) supervision in the community, (b) guardianship, and (c) institutional care. The New Town Infirmary has been declared to be a Government Institution for Defectives, and the Reformatory section of the Hobart Gaol has been declared to be a Government Institution for the care of criminal defectives. The examination by the Clinic includes ascertainment of and investigation into such particulars concerning the bodily (physical and medical), mental, and social conditions, the pedagogical, personal, and family history of persons alleged to be defectives, as well as any conditions and circumstances which may be necessary for diagnosis. During the years 1922–23 to 1924–25, 763 children and adults were examined by the Psychological Clinic, while 263 persons have been ascertained to be defectives, certified and registered. The latter have been classified as follows:—Idiots 5; Imbeciles 44; Feeble-minded 214.

In addition, there are idiots and imbeciles in the New Norfolk Mental Diseases Hospital dealt with under the Lunacy Act, and there are unascertained imbeciles and feeble-minded adults in the New Town Infirmary (Benevolent Home). So far 130 defectives have come under the direct control of the Mental Deficiency Board, and have been dealt with as follows:—Institution 12; Guardianship 24; Supervision 84; Parole 10.

The Education Department controls feeble-minded children in the State Schools and provides special classes for them. On attaining the age of 14 or 16 years, according as they are or are not in special classes, these defectives are notified by the Department to the Mental Deficiency Board, which then assumes the control of them. A state school population of about 19,000 children has been surveyed by the Clinic, and the percentage of feeble-minded (moron) children of school age has been ascertained to be about 0.5 per cent. The percentage of all grades of defectives in the whole population is not likely to exceed 0.3 per cent.

7. Protection of Aborigines.—For the protection of the aboriginal Australian race there are institutions, under the supervision of Aborigines Boards, where the blacks are housed and encouraged to work, the children receiving elementary education. The work is usually carried on at mission stations, but many of the natives are nomadic, and receive food and clothing when they call, whilst others but rarely come under the notice of the Boards. The native race is extinct in Tasmania. The approximate annual expenditure on maintenance, etc., is—New South Wales, £35,000; Victoria, £6,000; Queensland, £40,000; South Australia, £25,000; Western Australia, £35,000; Northern Territory, £10,000; total for Australia, £151,000. In 1924 in New South Wales the number of full-bloods receiving aid was 1,554, in addition to which there were half-castes, quadroons, and octoroons; in Victoria there were 317 under the care of the Aborigines Protection Board; in Queensland, at the end of 1923, there were 3,755 aborigines at the mission stations; in South Australia, in 1923, there were about 800 inmates at mission stations, while in Western Australia the adult aborigines and half-castes in the native institutions in the year 1923 numbered 534. At the mission stations in the Northern Territory about 1,500 were in residence, but casual assistance and medical attendance are given to large numbers of natives every year.

8. Royal Life Saving Society.—In each of the State capitals, “centres” of the Royal Life Saving Society have been established. Life preservation is the object of the Society, and its immediate aims are (a) educative and (b) remedial. The encouragement of swimming and life-saving in schools, colleges, clubs, etc., will bring about a more widespread knowledge of these necessary matters, and there is increasing provision of life-belts, reels, lines, and other first-aid appliances on ocean beaches, wharves, and other suitable places. Upwards of 3,000 certificates of proficiency in various grades are issued annually after examination.

9. **Royal Humane Society.**—The Royal Humane Society of Australasia has for its objects (a) to grant awards for skill, promptness, and perseverance in life saving; (b) to provide assistance in cases of danger and apparent death; (c) to restore the apparently drowned; (d) to collect and circulate the latest information regarding approved methods and apparatus for life saving. Awards of medals and certificates are made numbering about 100 annually. Upwards of 350 lifebuoys have been provided at various places on the coasts, rivers, lakes, and reservoirs in the various States. Swimming is encouraged amongst school children, and awards are made for proficiency.

10. **Other Charitable Institutions.**—Owing to variety of name and function of other charitable institutions it has been found impracticable to give detailed results. The aid given in kind—food, clothing, tools of trade, etc.—is considerable, whilst the shelter and treatment afforded range from a bed for a night for casual callers in establishments ministering minor charity, to indoor treatment over long periods in those that exist for the relief of the aged and infirm. The institutions not so particularized include asylums for the deaf, dumb, and blind, maternity institutions and infant homes, homes for the destitute and aged poor, industrial colonies, night shelters, crèches, homes of hope, rescue homes, free kindergarten and ragged schools, auxiliary medical charities, free dispensaries, benevolent societies and nursing systems, ambulance and health societies, boys' brigades, humane and animals' protection societies, prisoners' aid associations, shipwreck relief societies, bush fires and mining accident relief funds, etc.

11. **Total Expenditure on Charities.**—The table below gives the total expenditure on charities (excluding Old-age pensions) in each of the last five years, the figures for the various States being compiled, as far as possible, on the same basis:—

TOTAL EXPENDITURE ON CHARITIES, 1919 TO 1923.

State or Territory.	1919.	1920.	1921.	1922.	1923.
	£	£	£	£	£
New South Wales ..	1,856,751	2,391,057	2,540,606	2,532,039	2,754,759
Victoria ..	1,042,295	1,230,566	1,459,163	1,521,278	1,488,058
Queensland ..	796,688	933,547	1,017,817	975,028	991,753
South Australia ..	348,268	416,303	520,879	551,596	546,528
Western Australia ..	398,901	451,738	475,802	457,661	468,179
Tasmania ..	161,764	199,206	206,513	216,580	215,494
Northern Territory ..	6,830	6,178	6,265	5,585	6,625
Total ..	4,611,497	5,628,595	6,227,045	6,259,767	6,471,396

The figures include expenditure from Government and private sources of all institutions and societies affording relief, for which particulars are available.

CHAPTER XII.

PUBLIC HYGIENE.

§ 1. Public Health Legislation and Administration.

1. **General.**—(i) *Commonwealth.* The Commonwealth Department of Health, which was created on the 3rd March, 1921, and commenced its administration as from the 7th March, 1921, is controlled by the Commonwealth Minister of Health. The Department was formed by the extension and development of the Commonwealth Quarantine Service, the Director of Quarantine becoming the Commonwealth Director-General of Health and Permanent Head of the Department.

The functions of the Department are as follows:—

The administration of the Quarantine Act: The investigation of causes of disease and death and the establishment and control of laboratories for this purpose: The control of the Commonwealth Serum Laboratories and the commercial distribution of the products manufactured in those laboratories: The methods of prevention of disease: The collection of sanitary data, and the investigation of all factors affecting health in industries: The education of the public in matters of public health: The administration of any subsidy made by the Commonwealth with the object of assisting any effort made by any State Government or public authority directed towards the eradication, prevention, or control of any disease: The conducting of campaigns of prevention of disease in which more than one State is interested: The administrative control of the Australian Institute of Tropical Medicine: The administrative control of infectious disease amongst discharged members of the Australian Imperial Forces: The study of the behaviour of communicable diseases throughout the world and acting as an intelligence bureau for the collection and dissemination of information: The control of venereal disease and infectious diseases in the Mercantile Marina: The inspection of vessels, and the medical inspection of seamen under the Navigation Act: The control of the importation of food and drugs under the Commerce Act: Generally to inspire and co-ordinate public health measures: Any other functions which may be assigned to it.

As noted above, the Department controls the Australian Institute of Tropical Medicine at Townsville, and it directs the campaign in connexion with hookworm disease. These matters, together with the control exercised by the Department over malaria and bilharziasis introduced by returned soldiers and sailors, are dealt with separately in subsequent pages in this chapter (see § 5). Reference to the Commonwealth Serum Laboratories will be found in § 4, 5.

(ii) *New South Wales.* The Department of Public Health is controlled by the Minister of Public Health. The Director-General of Public Health is the chief executive officer, and is assisted by various staffs—medical, bacteriological, chemical, veterinary, dairy inspection, meat inspection, sanitary, pure food, and clerical. The work of the Department extends over the whole of the State, and embraces all matters relating to public health and the general medical work of the Government, the Director-General of Public Health holding the position of Chief Medical Officer of the Government as well as being permanent head of the Department.

The Board of Health has certain statutory duties imposed upon it by various Acts of Parliament, and the Director-General is President of the Board. These duties consist largely in supervision of the work of local authorities (Municipal and Shire Councils), so far as that work touches upon public health matters connected with the following Acts:—Public Health Act 1902, Public Health (Amendment) Acts 1915 and 1921, Dairies Supervision Act 1901, Noxious Trades Act 1902, Cattle Slaughtering and Diseased Animals and Meat Act 1902, Pure Food Act 1908, Private Hospitals Act 1908, and Venereal Diseases Act 1918. The Board further possesses certain powers connected with public health matters under the Local Government Act 1919. The Board of Health is a nominee Board, created in 1881 and incorporated in 1894.

The Director-General of Public Health acts independently of the Board of Health as regards the State hospitals and asylums and the various public hospitals throughout the State which receive subsidies from the Government.

(iii) *Victoria.* In this State the Public Health Acts 1915, 1919, and 1922 are administered by a Commission composed of the Chief Health Officer and six members appointed by the Governor-in-Council. The medical and sanitary staffs of the Commission consist of (a) the chief health officer, who is also chairman, (b) six district health officers and three assistant health officers, (c) chief sanitary engineer and assistant sanitary engineer, three building surveyors and four building inspectors, and (d) twelve health inspectors. The main function of the Commission is to enforce the execution of the Health Acts by the local municipalities, but it has been found advisable to supplement this supervisory function by an active policy of inspection of the sanitary condition of various districts, and the sampling of articles of food. The supervision of the sanitary conditions of milk production is under the Dairy Supervision Branch of the Department of Agriculture, but distribution is supervised by the Commission. Acts administered by the Department of Public Health are:—The Health Acts (in which are now included the Adulteration of Wine Act, the Pure Food Act, the Meat Supervision Act) and the Cemeteries Act, which includes the Cremation Act. The Department administers also the Midwives Act, the Goods Act, the Venereal Diseases Act, the Infectious Diseases Hospital Act, the Heatherton Sanatorium Act, the Masseurs Act, and the Nurses Registration Act.

(iv) *Queensland.* The Public Health Acts 1900 to 1922 are administered by the Commissioner of Public Health under the Home Secretary. The executive staff of the Department includes a health officer, a medical officer for the tuberculosis bureau, two medical officers for venereal diseases, fourteen food and sanitary inspectors, and one staff nurse. There are, in addition, rat squads in Brisbane. Northern offices, in charge of inspectors, are located at Rockhampton, Townsville, and Cairns, whilst another inspector is stationed at Toowoomba. A laboratory of microbiology and pathology, in charge of a medical director, is controlled by the Department, and performs a wide range of microbiological work for the assistance of medical practitioners and the Department.

One function of the Department is to stimulate and advise local sanitary authorities on matters pertaining to the Health Acts, and, where necessary, to rectify or compel rectification, at the cost of the local authority, of sanitary evils produced by local inefficiency or apathy. Its powers and responsibilities were widely increased by the Amending Acts of 1911, 1914, 1917, and 1922.

(v) *South Australia.* The Central Board of Health consists of five members, three of whom (including the chairman, who is permanent head of the Department) are appointed by the Governor, while one each is elected by the city and suburban local Boards and the country local Boards. The Health Act 1898 to 1918 provides that the municipal and district councils are to act as local Boards of Health for their respective districts. There are 188 of these local Boards under the general control and supervision of the Central Board. A chief inspector and one inspector under the Health and Food and Drugs Acts periodically visit the local districts, and see generally that the Boards are carrying out their duties. There is also a chief inspector of food and drugs (under the Food and Drugs Act 1908 to 1922), who, in company with an analyst, visits country districts, and takes samples of milk, which are analysed on the spot. There are three nurse inspectors employed in advising and assisting local Boards in connexion with outbreaks of infectious diseases and in carrying out generally similar duties to those of male inspectors, with the exception of certain work under the Food and Drugs Act. In the outlying districts there are sixteen inspectors directly responsible to the Board. The Venereal Diseases Act 1920, which provides for the prevention and control of venereal diseases, has not yet been proclaimed.

(vi) *Western Australia.* The legislation in this State comprises the Health Act 1911, with the amending Acts of 1912 (2), 1915, 1918, and 1919, which have been partly consolidated and reprinted as "The Health Act 1911-19." Further amending Acts were passed in 1920 and 1921. The central authority is the Department of Public Health, controlled by a Commissioner, who must be a qualified medical practitioner. The local authorities

comprise :—(a) Municipal Councils, (b) Road Boards where the boundaries of a Health District are conterminous with those of a Road District, and (c) Local Boards of Health, composed of persons appointed by the Governor. These local Boards are utilized only where neither Municipal Councils nor Road Boards are available. Generally speaking, the Act is administered by the local authorities, but the Commissioner has supervisory powers, also power to compel local authorities to carry out the provisions of the Act. In cases of emergency, the Commissioner may exercise all the powers of a local health authority in any part of the State.

All the usual provisions for public health legislation are contained in the Act, and, in addition, provision is made for the registration of midwifery nurses, the medical examination of school children, the control of public buildings (i.e., theatres, halls, etc.), the control of food, and the provision of standards therefor. The amending Acts of 1915 and 1918 deal exclusively with venereal diseases.

(vii) *Tasmania*. The office of Director of Public Health was established under the Director of Public Health Act 1920, and the person holding the office of Chief Health Officer under the Public Health Act 1903 at the time of the passing of the first-named Act is the Director of Public Health, and is also the permanent head of the Department. The Mental Diseases Hospital is, moreover, controlled by this Department. The Director has very wide powers, and in the event of the appearance of dangerous infectious disease (small-pox, plague, etc.) in the State, is vested with supreme power, the entire responsibility of dealing with such an outbreak being taken over by him from the local authorities. Local executive is vested in local authorities, who possess all legal requirements for the efficient sanitary regulation of their districts. Controlling and supervisory powers over these bodies are possessed by the Department of Public Health, and many of the powers conferred upon them may be converted into positive duties. One function of the Department is to advise local authorities on matters pertaining to the Health Act, and, where necessary, to rectify sanitary evils produced by local inefficiency or apathy. The Department has four full-time inspectors, who assist and instruct the local sanitary inspectors, but full-time district health officers are not provided for. The number of local authorities under the Public Health Act has been reduced to forty-nine since the Local Government Act 1906 came into force. All parts of Tasmania are now furnished with the administrative machinery for local sanitary government.

The Public Health Acts 1917 and 1918 deal with venereal diseases. Regulations under the Public Health Act 1903, as amended, for checking or preventing the spread of any infectious disease, came into force in February, 1918.

The Places of Public Entertainment Act 1917 is administered by the Director of Public Health under the Minister. This Act provides, *inter alia*, for the licensing and regulation of places of public entertainment, for the appointment of a censor or censors of moving pictures, and for the licensing of cinematograph operators. Comprehensive regulations have been framed under the Act. Inspectors under the Public Health Act 1903 are Inspectors of Places of Public Entertainment under this Act.

§ 2. Inspection and Sale of Food and Drugs.

1. **General.**—Under the Acts referred to later and the regulations made thereunder, the importation of articles used for food or drink, of medicines, and of other goods enumerated, is prohibited, as also is the export of certain specified articles, unless there is applied to the goods a "trade description" in accordance with the Act. Provision is made for the inspection of all prescribed goods which are imported or which are entered for export.

2. **Commonwealth Jurisdiction.**—Under Section 51 (i) of the Commonwealth Constitution Act 1900, the Commonwealth Parliament has power to make laws with respect to trade and commerce with other countries and among the States. By virtue of that power, the Federal Parliament passed the Commerce (Trade Descriptions) Act 1905, to which reference has already been made in Chapter VI., p. 214.

3. **State Jurisdiction.**—The inspection and sale of food and drugs are also dealt with in each State, either under the Health Acts or under Pure Food Acts. This work is carried out in each State by the Executive Officer of the Health Department. There is, in addition, a number of Acts dealing with special matters, such as the adulteration of wine and the oversight of bread and meat supply. The supply and sale of milk are also subject to special regulations or to the provisions of special Acts.

The general objects of these Acts are to secure the wholesomeness, cleanliness, and freedom from contamination or adulteration of any food, drug or article; and the cleanliness of receptacles, places, and vehicles used for their manufacture, storage or carriage. The sale of any article of food or any drug which is adulterated or falsely described is prohibited, as also is the mixing or selling of food or drugs so as to be injurious to health.

Power is given to any authorized officer to enter any place for the purpose of inspecting any article to be used as a food or drug, and also to inspect articles being conveyed by road, rail or water. The officer may take samples for analysis or examination, and may seize for destruction articles which are injurious to health or unwholesome. Special provision is generally made in the Acts with regard to the sale of preservatives and disinfectants.

In every State except Queensland, Advisory Committees have been appointed for the purpose of prescribing food standards, and for making recommendations generally with a view to carrying out the provisions of the Acts. The duty of enforcing these regulations is entrusted to the local authorities.

4. **Food and Drug Standardization.**—Conferences with the object of securing uniformity in these matters were held in Sydney in 1910, and in Melbourne in 1913. The resolutions of the latter conference were submitted to the Premiers' Conference held in Melbourne in March, 1914, and in conformity with the determinations arrived at, each State issued regulations which have had the effect of ensuring uniformity throughout Australia.

5. **Sale and Custody of Poisons.**—In New South Wales, Victoria, Western Australia and Tasmania, the enactments for regulating the sale and use of poisons are administered by the Pharmacy Boards in the respective States. In South Australia, the sale of poisons is provided for by regulations under "The Food and Drugs Act 1908," administered by the Central Board of Health. In Queensland, the sale of poisons is under the control of the Health Department.

In New South Wales, Victoria, and Tasmania the Government formerly subsidized the Pharmacy Board, in order to enable it to carry out the provisions of the Poisons Act. The New South Wales Board does not now obtain a subsidy, as the fees collected are sufficient to defray expenses. The subsidy to the Victorian Board was withdrawn in March, 1921, provision having been made for the payment of a 10s. licence fee under the Poisons Act 1920.

No persons, other than legally qualified medical practitioners and registered pharmaceutical chemists, are permitted to sell poisons, without special licence from the bodies administering the legislation in the respective States. These licences are issued to persons in business distant from four to five miles from a registered chemist, on production of certificates from medical practitioners, police, or special magistrates or justices as to the applicant's character and fitness to deal in poisons. Annual licence fees, ranging from 5s. to 40s., are charged. New poisons regulations were approved in Queensland on the 26th November, 1924, amongst which are stringent restrictions on the sale of cyanide of potassium. A revised list of standard poisons was gazetted in Western Australia in December, 1922.

Special conditions attaching to the sale of poisons were alluded to on p. 1055 of Official Year Book No. 12.

Partial exemptions from the regulations are made in some States in the case of sales of poisons for agricultural, horticultural and photographic purposes, in so far that any person may sell such poisons subject to the restrictions as to the class of container and the manner in which they may be sold. The sale of what are generally known as industrial poisons—such as sulphuric acid, nitric acid, hydrochloric acid, soluble salts of oxalic acid, formalin, etc.—is governed by regulations, as also is the sale of poisons for the destruction

of rats, vermin, etc. Under the existing laws these poisons may, in most of the States, be sold by any one. The Victorian Parliament, in December, 1920, passed an amending Poisons Act, in which the word "wholesale" has for the first time been defined as meaning "sale or supply for the purposes of re-sale," providing for an annual fee of 10s. and the issuing of licences to dealers in exempted poisons. A new principle is introduced into the Victorian Poisons Act of 1920. Certain drugs are declared to be "potent drugs" and may be sold by pharmaceutical chemists only. These drugs include acetanilid, adrenalin, oil of tansy, pituitary extract, thyroid gland preparations, and any serum or vaccine for human use. Under the Victorian "Dangerous Drugs Regulations, 1922," which came into effect on the 1st January, 1923, further restrictions were imposed on the manufacture and sale of abortifacients and of habit-forming drugs such as ergot, morphine, opium, heroin, cocaine, veronal, etc. Regulations regarding dangerous drugs (cocaine, morphia, etc.) are included in the amended Queensland regulations of 26th November, 1924, referred to above.

§ 3. Supervision of Dairies, Milk Supply, etc.

1. *General.*—In Official Year Book No. 12 and preceding issues, allusion is made in general terms to the legislation in force in the various States to ensure the purity of the milk supply and of dairy produce generally, but limits of space preclude the repetition of this information in the present issue.

2. *Number of Dairy Premises Registered.*—The following table shows, so far as the particulars are available, the number of dairy premises registered and the number of cattle thereon. Compulsory registration is not in force throughout the whole area of the various States.

DAIRY PREMISES REGISTERED, AND CATTLE THEREON, 1924.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust. (b)	Tasmania.
Premises registered ..	21,604	21,202	(a)23,000	1,413	929	(c)
Cattle thereon ..	1,013,476	283,634	570,000	8,810	11,079	(c)

(a) Approximate number of dairies operating.

(b) For year 1921.

(c) Not available.

3. *New South Wales.*—The provisions of the Dairies Supervision Act 1901 extend to the whole of the Eastern and Central Divisions and to all important dairying districts further inland. Other districts are brought under the operation of the Act by proclamation from time to time. Every dairyman, milk vendor, and dairy factory or creamery proprietor is required under penalty to apply for registration to the local authority for the district in which he resides, and also to the local authority of every other district in which he trades. Registration must be applied for prior to commencing trade, and must be renewed annually. The Chief Dairy Inspector is in charge of all inspectorial work under the Dairies Supervision Act 1901, and has assisting him fifteen qualified dairy inspectors, each in charge of a district. During 1924, samples of milk numbering 15,959, and of food and drugs numbering 834 were taken from the vendors for examination, and 12,696 dairy premises were inspected. Where necessary, warnings and prosecutions followed. A sum of over £2,400 was imposed in fines for adulteration, want of cleanliness, etc.

4. *Victoria.*—The registration, inspection and supervision of dairies, dairy farms, dairy produce, milk stores, milk shops, milk vessels, dairy cattle and grazing grounds are provided for by the Dairy Supervision Act 1915, and the Milk Supply Act 1922, administered by the Minister of Agriculture. The supervision of butter and cheese factories is provided for by the Dairy Produce Act 1919. Under the Health Act, however, the Department of Public Health is empowered to take samples of food (including milk, cream, butter, cheese, and other dairy products) for examination or analysis, and to institute prosecutions in case of adulterated or unwholesome food. During the year ended 30th June, 1923, 1,091 samples of milk were analysed by the Public Health Department.

By the end of the year 1923, 117 municipal districts, comprising about one-third of the area of the State, had been brought under the operation of the Dairy Supervision Act. The municipal councils have the option of carrying out the administration of the Act or of deciding that the work should devolve upon the Department of Agriculture; up to the present all the municipalities in which the Act has been proclaimed have elected for Departmental administration.

The Milk Supply Act 1922 provides for the appointment of a Milk Supply Committee with power to issue regulations to govern the milk supply of the metropolis, and to disseminate information concerning the best methods of handling the product.

The Council of any metropolitan municipality, or a group of councils acting together may establish depots at which milk may be bought, treated, and sold. The Committee may, however, issue certificates authorizing persons to sell milk, but, in an area in which there is a municipal depot, no milk may be sold unless it has been treated in a depot or, by approved methods, in a factory. Milk sold in containers must have the grade specified on the label. A laboratory has been established to carry out researches in matters relating to milk.

5. *Queensland.*—The control and supervision of the milk supply, of dairies, and of the manufacture, sale, and export of dairy produce are provided for by the Dairy Produce Act 1920, administered by the Department of Agriculture and Stock. This Act and the regulations made thereunder apply only to prescribed areas which comprise the whole of the coastal district from Rockhampton down to the New South Wales border, and the Darling Downs, Maranoa, Mackay, and Cairns districts. In certain proclaimed areas the sale of milk is restricted to persons licensed under the Milk Sellers' Regulations of 1924. Milk for sale is supervised by inspectors of the Health Department under the Health Acts 1900-1922. During the year ended 30th June, 1924, 525 samples of milk were analysed.

6. *South Australia.*—The Food and Drugs Act 1908, and the Regulations made thereunder, provide for the licensing of vendors of milk, and the registration of dairies, milk stores and milk shops. The Metropolitan County Board carries out the requirements of the metropolitan area. In the country, the majority of local authorities have not made statutory provision for the licensing of vendors of milk and the registration of dairy premises; and, in consequence, the Central Board of Health provides for such under the Act.

7. *Western Australia.*—Under the provisions of the Health Act control of dairies throughout the State is in the hands of the Public Health authorities. The premises of dairymen and milk vendors must be registered by a local authority. The inspectors under the Act supervise the sanitary condition of the premises, the examination of herds being carried out for the Health Department by officers of the Department of Agriculture. Inspection of herds is made at regular intervals, and the tuberculin test is applied in cases of suspected disease.

8. *Tasmania.*—Local authorities are responsible for the dairies in their respective districts. By-laws for the registration and regulation of dairies have been drafted by the Public Health Department, and in the majority of cases have been adopted by the local authorities. The Food and Drugs Act 1917 provides that the municipal council of every city or municipality shall submit for analysis such samples of food or drugs as may be specified by the Chief Officer. The sampling is, in the majority of municipal districts, carried out by the Public Health Department, and particular attention is paid to milk. An Act also provides for the registration and inspection of dairies and other premises where dairy produce is prepared, and regulates the manufacture, sale, and export of such produce.

§ 4. Prevention and Control of Infectious and Contagious Diseases.

1. *General.*—The provisions of the various Acts in regard to the compulsory notification of infectious diseases and the precautions to be taken against the spread thereof may be conveniently dealt with under the headings—Quarantine; Notifiable Diseases, including Venereal Diseases; and Vaccination.

2. *Quarantine.*—(i) General.* The Quarantine Act is administered by the Commonwealth Department of Health, and uniformity of procedure has been established in respect of all vessels, persons, and goods arriving from overseas ports or proceeding from one State to another, and in respect of all animals and plants brought from any place outside Australia. In regard to inter-state movements of animals and plants, the Act becomes operative only if the Governor-General be of opinion that Federal action is necessary for the protection of any State or States; in the meantime the administration of inter-state quarantine of animals and plants is left in the hands of the States. The Commonwealth possesses stations in each State for the purposes of human and also of animal quarantine.

(ii) *Administration of Act.* The administration of the Act in respect of the general division, *i.e.*, vessels, persons, and goods, and human diseases, is under the direct control of the Commonwealth in all States except Tasmania. A medical chief quarantine officer, with assistant quarantine officers, has been appointed in each State. This officer is charged with responsible duties, and is under the control of the Director-General of Health. In Tasmania, the chief health officer of the State acts as chief quarantine officer, and payment is made to the State for his services. The administration of the Act in the Northern Territory has been combined with that of Queensland under the chief quarantine officer for the North-eastern division. The administration of the Acts and Regulations relating to overseas animal and plant inspection and quarantine is carried out by the officers of the State Agricultural Departments acting as quarantine officers.

(iii) *Chief Provisions of Act.* The Act provides for the inspection of all vessels including air-vessels, from overseas, for the quarantine, isolation, or continued surveillance of infected or suspected vessels, persons, and goods, and for the quarantining and, if considered necessary, the destruction of imported goods, animals, and plants. The obligations of masters, owners, and medical officers of vessels are defined, and penalties for breaches of the law are prescribed. Power is given to the Governor-General to take action in regard to various matters by proclamation, and to make regulations to give effect to the provisions of the Act. Quarantinable diseases are defined as small-pox, plague, cholera, yellow fever, typhus fever, leprosy, or any other disease declared by the Governor-General, by proclamation, to be quarantinable. "Vessel" is defined as "any ship, boat or other description of vessel or vehicle used in navigation by sea or air." "Disease" in relation to animals means certain specified diseases, or "any disease declared by the Governor-General by proclamation, to be a disease affecting animals." "Disease" in relation to plants means "any disease or pest declared by the Governor-General, by proclamation, to be a disease affecting plants." The term "plants" is defined as meaning "trees or plants, and includes cuttings and slips of trees and plants and all live parts of trees or plants and fruit."

(iv) *Proclamations.* The proclamations so far issued specify the diseases to be regarded as diseases affecting animals and plants; appoint first ports of landing for imported animals and plants, and first ports of entry for overseas vessels; declare certain places beyond Australia to be places infected or as places to be regarded as infected with plague; prohibit the importation (a) of certain noxious insects, pests, diseases, germs, or agents, (b) of certain goods likely to act as fomites, and (c) of certain animals and plants from any or from certain parts of the world; fix the quarantine lines, and define mooring grounds in certain parts of Australia.

(v) *Miscellaneous.* At present, instead of all overseas vessels being examined in every State, as was formerly the case, those arriving from the east and west are now examined only at the first port of call, and pratique is given for the whole of the Commonwealth except in cases of suspicious circumstances, while vessels arriving from the northern routes are examined only at the first and last ports. It is expected that the restrictions placed upon overseas vessels will be further removed as the machinery of quarantine is improved. The present freedom from certain diseases which are endemic in other parts of the world would, however, appear to justify the Commonwealth in adopting precautionary measures not perhaps warranted in the already infected countries of the old world.

3. *Notifiable Diseases.—A. General.—(i) Methods of Prevention and Control.* Provision exists in the Health Acts of all the States for precautions against the spread, and for

* From information furnished by the Commonwealth Director-General of Health.

the compulsory notification of infectious diseases. When any such disease occurs, the Health Department and the local authorities must at once be notified. In some States notification need only be made to the latter. The duty of giving this notification is generally imposed, first, on the head of the house to which the patient belongs, failing whom on the nearest relative present, and, on his default, on the person in charge of or in attendance on the patient, and on his default, on the occupier of the building. Any medical practitioner visiting the patient is also bound to give notice.

As a rule the local authorities are required to report from time to time to the Central Board of Health in each State as to the health, cleanliness, and general sanitary state of their several districts, and must report the appearance of certain diseases. Regulations are prescribed for the disinfection and cleansing of premises, and for the disinfection and destruction of bedding, clothing, or other articles which have been exposed to infection. Bacteriological examinations for the detection of plague, diphtheria, tuberculosis, typhoid, and other infectious diseases within the meaning of the Health Acts are continually being carried out. Regulations are provided in most of the States for the treatment and custody of persons suffering from certain dangerous infectious diseases, such as small-pox and leprosy.

(ii) *New South Wales.* The proclamation and notification of infectious diseases are dealt with in Part II. of the Public Health Acts 1902 and 1915. Notification of infectious disease must be made to the local authority by the head of the family, etc., and by the medical practitioner. Provision is made for the disinfection or destruction of premises. Restrictions are placed upon the attendance at school of children suffering from infectious disease or residing in a house in which infectious disease exists. Special provisions have been made with regard to typhoid fever, tuberculosis, small-pox and leprosy, and legislation has been passed dealing with venereal diseases.

(iii) *Victoria.* Under the Health Act 1919 any disease may be declared to be notifiable throughout the State. The occupier of a house containing a case of infectious disease, and also the medical practitioner, must report the fact to the Council. The Medical Officer of Health may order the removal of a patient to a hospital when such is available. The occupier of the house must also inform the head teacher of the school of any child suffering from notifiable disease or residing in an infected dwelling. The notification of venereal diseases is dealt with in the Venereal Diseases Act 1916.

(iv) *Queensland.* Part VII. of the Health Act 1917-1922 stipulates that all cases of infectious disease must be notified by the occupier of the house, and the medical practitioner attending the case. Restrictions are placed on the attendance at school of children suffering from a notifiable disease. Special measures must be taken against typhoid, small-pox, and venereal diseases. Leprosy is dealt with under the Leprosy Act 1892.

(v) *South Australia.* Cases of infectious diseases must be reported to the local board, under the provisions of Part VIII. of the Health Act 1898. The duty of notification rests primarily on the head of the family, and, in addition, the medical practitioner must report the case. Children suffering from or resident with a person suffering from an infectious disease must not attend school till they hold a certificate that there is no risk of infection. Venereal diseases will be dealt with under the provisions of the Venereal Diseases Act 1920 which, however, is not yet in operation.

(vi) *Western Australia.* The Health Acts 1911 to 1922 provide for the notification and control of infectious diseases, including venereal diseases. The occupier of a house containing a case of infectious disease, and the medical practitioner, must report the case to the local authority. Children may not attend school within three months of suffering from any infectious disease unless they possess a certificate of freedom from infection. Special provisions apply to typhoid fever, tuberculosis, and venereal diseases.

(vii) *Tasmania.* The provisions regarding the notification and prevention of infectious diseases are contained in the Public Health Act 1903 and amending Acts. Notification of cases devolves upon the medical practitioner or the occupier of the house. Special measures are provided for dealing with typhoid, small-pox, and venereal diseases.

(viii) *Diseases Notifiable in each State.* In the following statement diseases notifiable in each State are indicated by a cross :—

DISEASES NOTIFIABLE UNDER THE HEALTH, ETC., ACTS IN EACH STATE.

Particulars.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.
Acute lobar pneumonia	(c)	+	..
Anthrax	+	..	+	+	..
Ankylostomiasis	+	+
Beri-beri	+	..
Bilharziasis	+	+	+	+	+
Bubonic plague	+	+	+	+	+
Cerebro-spinal fever	+	+	+
Cerebro-spinal meningitis	+	+	+	+	+
Chicken-pox	+
Cholera	+	..	+	..	+
Colonial fever	+	..
Continued fever	+	..	+	..
Dengue fever	+	..
Diphtheria	+	+	+	+	+
Dysentery	+	+(a)	..	+	..
Encephalitis lethargica	+	+
Enteric fever	+	+	+	+	+
Erysipelas	+	+	..
Favus	+
Hæmaturia	+	..	+	+
Infantile paralysis	+	+	+	+	+
Influenza	+(c)	+	..
Leprosy	+	+	+	+	+
Low fever	+	..
Malarial fever	+	+	+	+	+
Malta fever	+	..
Measles	+
Membranous croup	+	..	+	+	..
Pneumonic influenza	+(c)	..	+
Polioencephalitis	+
Poliomyelitis anterior acuta	+	+	+	+	+
Puerperal fever	+	+	+	+	+
Pulmonary tuberculosis (phthisis) ..	+(a)	+	+	+	+	+
Pyæmia	+	..
Relapsing fever	+
Scarlet fever	+	+	+	+	+
Scarlatina	+	+	+	+	+
Septicæmia	+	..
Small-pox	+	+	+	+	+
Trichinosis	+
Tuberculosis	+	+
Tuberculosis in Animals	+
Typhoid	+	+	+	+	+
Typhus fever	+	+	+	+
Venereal Diseases :—						
Chancroid (soft chancre) ..	+	+	+	+(d)	+	+
Gleet ..	+	+(d)	+	..
Gonorrhœa ..	+	+	+	+(d)	+	+
Gonorrhœal ophthalmia ..	+	+(d)	+	..
Infective granuloma of the pudenda ..	+	+	+	+(d)	+	..
Ophthalmia neonatorum	+	+	..	+	+
Syphilis	+	+(b)	+(d)	+	+
Venereal warts ..	+	..	+	+(d)	..	..
Whooping cough	+
Yellow fever	+	+	+	+	..

(a) Notifiable in certain areas only. (b) Primary and secondary stages only. (c) In South Australia influenza vera is notifiable, and any febrile toxic-septicæmic condition similar to influenza, including pneumonic influenza. (d) Act not yet in operation.

B. Venereal Diseases.—(i) *General.* The prevention and control of venereal diseases are undertaken by the States. Each State has a Venereal Diseases Act, or provisions in the Health Act govern the working of the measures taken to combat these diseases. In every State notification has been made compulsory. A list of notifiable forms of venereal complaints appears on page 512. Steps have been taken to ensure free treatment by medical practitioners or in subsidized hospitals. Registered pharmaceutical chemists are allowed to dispense prescriptions only when signed by medical practitioners. Clinics have been established, and, in some cases, beds in public hospitals have been set aside for patients suffering from these diseases.

Penalties may be imposed on a patient who fails to continue under treatment. Clauses are inserted in the Acts which aim at preventing the marriage of any patient or the employment of an infected person in the manufacture and distribution of foodstuffs.

The Commonwealth Government has granted a subsidy of £15,000 per annum to the various States to assist in providing hospital treatment and administrative control. The supervision of this work, in so far as it relates to the expenditure of the subsidy, is undertaken by the Commonwealth Department of Health. In February, 1922, a conference was held to consider the means of securing the best results from this subsidy.

(ii) *New South Wales.* The Venereal Diseases Act 1918 came into operation on 1st December, 1920. The Act, which is administered by a Commissioner, aims at ensuring that all cases of venereal disease will have immediate and continued treatment. Clinics have been established at subsidized hospitals. Notification is compulsory; a person suffering from the disease is required to place himself under the treatment of a medical practitioner or to attend a hospital within three days of becoming aware of the existence of the disease, and to continue treatment until a cure is effected. During 1924, notifications numbered 6,090. Satisfactory results are being obtained from action taken in cases where patients have been reported for failure to continue treatment as required by the Act. A number of prosecutions—all of which have been successful—has been undertaken for (a) sale of drugs prohibited under the Act, (b) treatment of venereal disease by a person other than a medical practitioner, and (c) for failing to undergo treatment when required.

(iii) *Victoria.* Under the Venereal Diseases Acts 1916 and 1918 the control of venereal disease is undertaken by the Department of Public Health. The Acts provide for compulsory treatment by qualified medical practitioners of all persons suffering from the disease. All hospitals in receipt of State aid treat patients. Three evening and three day clinics have been established at hospitals in Melbourne, and in June, 1918, a special departmental clinic was instituted. Notification of the disease is compulsory, and 5,264 cases were notified in 1924. Between the 17th June, 1918, and 30th June, 1924, 12,811 cases were treated at the special departmental clinic, the attendances numbering 474,576.

(iv) *Queensland.* The Health Act 1900-22 confers power on the Commissioner of Public Health to deal with the prevention and control of venereal disease, and affected persons must place themselves under treatment by a medical practitioner. Persons other than medical practitioners are prohibited from treating the disease. Subsidized hospitals are required to make provision for the examination and treatment of cases reported to them, and clinics have been established in Brisbane and seven towns. Notification is compulsory, and during the year ended 30th June, 1924, 1,521 cases were reported. Visits to the Brisbane clinics numbered 9,146 by males, and 957 by females. Examination of prostitutes is conducted at Brisbane and eight other towns by medical officers appointed under regulation 10 of the Venereal Diseases Regulations of 1923.

(v) *South Australia.* The provisions of the Venereal Diseases Act 1920 (not yet in operation) are to be carried out by the Inspector-General of Hospitals. The Minister administering the Act may arrange with any public hospital to provide free accommodation and treatment, and may also establish hospitals and arrange for free examinations and free supply of drugs. Persons suffering from venereal disease will be compelled to consult a medical practitioner or attend a hospital and place themselves under treatment. No person other than a medical practitioner may attend or prescribe for patients.

(vi) *Western Australia.* The Health Act gives power to the Commissioner of Public Health to deal with venereal diseases, and persons suffering from these diseases must consult a medical practitioner and place themselves under treatment. No treatment may be given except by qualified medical practitioners. Free examination and treatment are given by subsidized hospitals.

(vii) *Tasmania.* The Public Health Act 1917–1918 authorized the Director of Public Health to take steps for the control of venereal diseases, and persons affected must place themselves under the care of a medical practitioner or of a hospital. The State-aided hospitals are required to provide treatment. During 1924, 516 cases were notified by medical practitioners. In accordance with an arrangement entered into by the Commonwealth and State Government, the latter has made provision for the free maintenance and treatment of persons suffering from venereal diseases.

4. *Vaccination.*—(i) *General.* In New South Wales there is no statutory provision for compulsory vaccination, though in all the other States such provision has been made. Jennerian vaccine for vaccination against small-pox is prepared at the Commonwealth serum laboratories in Melbourne. A moderate demand exists for the vaccine in Victoria, but in the other States the normal requirements are small. During the years 1912, 1913, and 1914, the output of the vaccine in doses from the dépôt was respectively 65,000, 570,000, and 146,000. The number of doses issued in 1913 was, however, abnormal, and was due to the epidemic of small-pox which broke out in Sydney at the end of June, this being followed by large numbers of vaccinations in each State.

(ii) *New South Wales.* Although there is no provision for compulsory vaccination, public vaccinators have been appointed. No statistics are available as to the proportion of the population which has been vaccinated, but a report of the Principal Medical Officer of the Education Department states that out of 55,740 children medically examined during 1919, 9,487, or 17 per cent., had been vaccinated.

(iii) *Victoria.* Compulsory vaccination, subject to a "conscience" clause is enforced throughout the State under Part VII. of the Health Act 1919. From the year 1873 up to 31st December, 1918, it is estimated that 72 per cent. of the children whose births were registered were vaccinated. Free lymph is provided. The number of children vaccinated during 1924 was 1,759, or less than 5 per cent. of the births registered.

(iv) *Queensland.* Although compulsory vaccination is provided for under Part VII. of the Health Act 1900–1922, its operation has not been proclaimed. Vaccination thus being purely voluntary, medical practitioners do not notify vaccinations.

(v) *South Australia.* The Vaccination Act 1882, which applies to South Australia and the Northern Territory, is administered by the vaccination officer of the State. Under this Act vaccination was compulsory, but in 1917 an Act to suspend compulsory vaccination was passed. There were only 2 vaccinations reported in 1924.

(vi) *Western Australia.* Vaccination is compulsory under the Vaccination Act 1878, which, however, remains almost a dead letter, seeing that under the Health Act 1911, a "conscientious objection" clause was inserted, which is availed of by the majority of parents. The number of children vaccinated is very small. All district medical officers are public vaccinators, but they receive no fees for vaccinations.

(vii) *Tasmania.* All infants are nominally required under the Vaccination Act 1898 to be vaccinated before the age of 12 months, unless either (a) a statutory declaration of conscientious objection is made, or (b) a medical certificate of unfitness is received. Information in regard to vaccinations in recent years is not available.

(viii) *Persons Vaccinated, 1920 to 1924.* Information regarding the number of vaccinations in recent years is not available for all States, and in those States for which figures are supplied the returns are incomplete. In Victoria 1,759 children were vaccinated during 1924, the annual average for the last five years being 2,974. In South Australia there were 2 vaccinations recorded in 1924, and the average for the last five years was only 4. Information is not available for the other States.

5. **Commonwealth Serum Laboratories.**—The establishment for the preparation of Jennerian Vaccine situated at Royal Park, near Melbourne, formerly known as the "Calf Lymph Depot" was in 1918 greatly enlarged by the Commonwealth. The remodelled institution is designated the "Commonwealth Serum Laboratories," and forms a division of the Commonwealth Department of Health. The list of bacteriological preparations produced by the laboratories has been extended so as to cover practically the whole range of biological products, thus forming a valuable national provision for the protection of public health.

6. **Health Laboratories.**—The Commonwealth Department of Health has established Health Laboratories at Rabaul, New Guinea, at Bendigo, Victoria, at Townsville, Toowoomba and Rockhampton, Queensland, at Port Pirie, South Australia, and Kalgoorlie, Western Australia, and arrangements are being made for the organization of similar laboratories in other parts of Australia.

The laboratory at Rabaul is carried on in conjunction with the hookworm campaign, and is working in close co-operation with the health organization of the New Guinea Administration.

The Bendigo Laboratory was opened in 1922. Besides carrying on the ordinary diagnostic and educational work of a health laboratory, it is undertaking, by means of an excellent X-ray equipment, the examination, diagnosis and treatment of persons suffering from miner's disease and tuberculosis.

The laboratory at Townsville is carried on in conjunction with the Australian Institute of Tropical Medicine at Townsville. The laboratory at Toowoomba was opened on 18th December, 1923. All of these laboratories are undertaking successfully the diagnostic, educative, and research work for which they were created.

7. **Industrial Hygiene.**—The Industrial Hygiene division of the Commonwealth Department of Health was established in December, 1921. Its objects are the collection of reliable data on which to base guidance and advice; investigation of industrial conditions affecting health; and the issue of advice to employers and employees for the improvement of conditions of work and for the safeguarding of health. Publications have been issued dealing with the scope of industrial hygiene, and with health hazards in industry. Expert advice is available to employers and employees, and it is anticipated that the work of the division will be of great value in guiding the development of industry along hygienic lines, and in improving generally the condition of workers. With a view to the adoption of a concerted scheme of action and a uniform basis for standards and records throughout Australia in connexion with the many important matters safeguarding the health of the industrial worker, conferences of delegates from the State Health and Labour Departments and the Commonwealth Department of Health were held in 1922 and in 1924.

A special article entitled "Industrial Hygiene in Australia" will be found at the end of this chapter.

8. **Sanitary Hygiene.**—A division of sanitary engineering was established in the Commonwealth Department of Health early in 1923. Investigation and inquiry have been made into numerous sanitary engineering problems affecting Australia, including a number referred to the Department by various State Governments. Advice is given generally on the protection of water supplies, drainage, and other engineering questions affecting health.

§ 5. Tropical Diseases.

1. **General.**—The remarkable development of parasitology in recent years, and the increase in knowledge of the part played by parasites in human and animal diseases, have shown that the difficulties in the way of tropical colonization, in so far as these arise from the prevalence of diseases characteristic of tropical countries, are largely removable by preventive and remedial measures. Malaria and other tropical diseases are coming more and more under control, and the improvements in hygiene which science

has accomplished lend an entirely new aspect to the question of white settlement in countries formerly regarded as unsuitable for colonization by European races. In Australia, the most important aspect of this matter is at present in relation to such diseases as filariasis, malaria, and dengue fever, which, although practically unknown in the southern States, occur in many of the tropical and sub-tropical parts.

2. Transmission of Disease by Mosquitoes.—(i) *Queensland.* The existence of filariasis in Queensland was first discovered in 1876. The parasite of this disease is transmitted by *Culex quinquefasciatus* (*Culex fatigans*), the mosquito most prevalent in Queensland. The mosquito *Aedes aegypti* (*Stegomyia fasciata*), conveyor of yellow fever (and probably of dengue fever also), is another common domestic mosquito throughout Eastern Queensland during the summer, but so far has never been infected from abroad. Occasional limited outbreaks of malaria occur in the northern parts of the State; one at Kidston, in 1910, resulted in 24 deaths. The infection was traced to newcomers from New Guinea. Allusion to the efforts made to deal with the mosquito, under the Health Act of 1911, will be found in Official Year Book No. 12, p. 1063. By an Order in Council the local authorities are now responsible for the taking of measures for the destruction and the prevention of breeding of mosquitoes.

(ii) *Other States.* In Western Australia it is stated that malaria is not known to exist south of the 20th parallel, while filariasis has never been discovered. Mosquito-borne diseases are unknown in Victoria, South Australia, and Tasmania, except for very rare sporadic cases, and it is stated that filariasis is uncommon in New South Wales, the only cases known being imported ones. Kerosene and petroleum have been successfully used, both by municipalities and private individuals, to destroy larvæ of mosquitoes at various places in these States.

(iii) *Northern Territory.* While the Territory is conspicuously free from most of the diseases which cause such devastation in other tropical countries, malaria exists, and, although cases rarely end fatally, the Administration is taking measures for the destruction of mosquito larvæ wherever settlements or permanent camps are formed, and precautions are being taken to prevent the collection of stagnant water in such localities.

3. Control of Introduced Malaria and Bilharziasis.—(i) *General.* The control of returned sailors and soldiers suffering from malaria and bilharziasis, which was undertaken by the Commonwealth Department of Health at the request of the Departments of Defence and Repatriation, is still being carried out in conjunction with State Health Departments.

(ii) *Malaria.* Steps were taken to have all recrudescences in returned sailors, soldiers and nurses in all parts of Australia notified direct to the Commonwealth Department of Health by the Medical Officers of the Repatriation Local Committees. Malaria is also notifiable to each State Health Department, except in New South Wales, and particulars of such notifications are passed on to the Commonwealth Department of Health.

Treatment on intensive lines has been regularly carried out in connexion with malaria recurrences in returned sailors and soldiers in order to effect a cure as rapidly as possible. Steps were also taken to prevent the settlement of malaria-infected individuals in localities such as irrigation areas, where mosquitoes capable of carrying malaria were known to exist.

From information received, it is evident that in the great majority of cases cure has now been established, and that where recrudescences do occur they have been greatly reduced in severity and frequency. The number of foci of infection has thus been reduced to unimportant dimensions, and the danger of spread of malaria in the community from this source has been practically eliminated.

(iii) *Bilharziasis.* With few exceptions the men who contracted this disease on active service have been brought in from all parts of Australia for expert re-examination and treatment.

Those who have suffered from the disease, and have undergone treatment as indicated above, are still kept under periodical observation, but owing to the success of the measures already taken it is believed that no danger of the spread of infection exists. Action is being taken in the case of a small number of men who have evaded treatment.

4. **Hookworm.**—An investigation made in Papua in 1917 by an officer of the International Board of Health of the Rockefeller Foundation disclosed the fact that half of all natives examined were infected with hookworm disease. In 1918, an investigation was undertaken in Queensland, and the prevalence of the disease and its effects in retarding growth and development were found to be greater than had been supposed. In October, 1919, the Australian Hookworm Campaign was begun. This campaign was supported jointly by the Commonwealth, the International Health Board of the Rockefeller Foundation, the State of Queensland, and the other States in which work in this direction was undertaken. By the end of 1922, the survey of Australia and its dependencies had been completed. The total number of examinations and treatments up to 1st January, 1924, including those in Dr. Waite's survey in Papua and the earlier work in Queensland, was as follows:—

People examined for hookworm disease	..	..	347,003
Found to be infected with hookworms	..	..	60,441 (17.4%)
Treated free by the Australian Hookworm Campaign	..	..	273,297*
Found to be cured on re-examination	..	..	11,242*

Endemic hookworm infection was found in intermittent areas along the eastern coast of Australia from Cape York to Macksville in New South Wales. The higher summer rainfall in these areas appears to be chiefly responsible for the localization of the infection. It is also found in the vicinity of Broome and Beagle Bay in Western Australia, in the northern part of the Northern Territory, and along the eastern coast of the Gulf of Carpentaria. In the Territory of Papua, 59.2 per cent. of the natives were found to be infected, and in the Territory of New Guinea, 74.2 per cent. There is no endemic hookworm infection in Victoria, South Australia, Tasmania, the interior of Queensland, New South Wales, except the north-eastern part, and Western Australia except the far north.

Metalliferous mines were examined in Victoria, South Australia, New South Wales, Tasmania, and Western Australia, and were found entirely free from hookworm infection. The examination of metalliferous mines in Queensland showed either no infection or a light infection which may have originated chiefly outside the mines. Coal mines in Victoria, Tasmania, and Western Australia were free of infection. Examinations were made in the coal mines of the Newcastle district, and among 1,226 miners examined in about 25 mines only five infected miners were found. In the Ipswich group of coal mines in Queensland, 31.5 per cent. of the miners were infected, and in the Howard-Torbanlea group (Queensland) 75.8 per cent. were infected. Recommendations were made with regard to the correction of the insanitary conditions responsible for these high infection rates.

Wherever operations are carried on by the hookworm campaign, emphasis is placed on the prevention of hookworm disease, in contrast to temporary relief through the curing of existing cases, and much work has been done to improve methods of night-soil disposal, and to teach the people the danger from soil pollution.

In thirteen of the endemic hookworm districts of Queensland in the original survey, 50,939 persons were examined and 7,658 were found to be infected—an incidence rate of 15 per cent. During the re-survey in 1893 of the same districts, 40,867 persons were examined, and 3,858 were found infected—an incidence rate of 9.4 per cent. The value of the measures of the hookworm campaign in regard to treatments and the prevention of soil pollution would thus appear to be demonstrated.

In the latter part of 1922, the scope of the campaign was widened to include a malaria and filaria survey in co-operation with the Division of Tropical Hygiene, Commonwealth Department of Health.

Up to the 1st January, 1924, 261 persons had been examined for malaria, of whom 40 were found infected. The endemic areas as indicated by this survey, would appear to be round Cooktown, Cairns, Palm Island and possibly the western portion of Northern Queensland.

In the same period, 11,028 persons were examined for filariasis, of whom 309 were found to be infected. The endemic area of this disease is apparently practically the whole of the Cape York Peninsula and a narrow strip along almost the entire coast of Queensland.

* Only part of the people treated were re-examined to find out whether they were cured. The total number cured was, therefore, much larger than shown.

On 30th September, 1924, the Australian Hookworm Campaign completed its five years' work. Arrangements had, in the meantime been made between the Commonwealth Government and the States of New South Wales and Queensland for the work to be carried on for a further period of three years under the direction of the Commonwealth Department of Health.

5. Institute of Tropical Medicine, Townsville.—The Australian Institute of Tropical Medicine was founded at Townsville in January, 1910. Since 7th March, 1921, the Institute has been administered by the Commonwealth Department of Health. A full account of the activities of this Institute will be found in Official Year Book No. 15, pp. 1010–1012.

6. Royal Commission on National Health—Towards the end of 1924, the Commonwealth Government appointed a Royal Commission to investigate and make recommendations to secure the most economical and efficient results in regard to the following matters :—The distribution of responsibility in Health matters between Commonwealth, State and Local Authorities; a common standard and uniformity in the control of food and drugs; the pollution of surface waters in the great river basins; the control of puerperal morbidity and mortality; cancer, tuberculosis and infectious diseases; and the developments in industrial hygiene.

§ 6. Medical Inspection of School Children.

1. General.—The health of school children is now recognized as a fundamental concern of modern Education Departments, and the medical branches have proved their value both to children and parents.

Medical inspection of school children is carried out more or less thoroughly in all the States. Medical staffs have been organized, while in some States travelling clinics have been established to deal with dental, ocular, and other defects.

2. New South Wales.—A system of medical inspection of school children was organized in 1913, and arrangements have been made, by means of triennial examinations, to examine each child at least twice during the period of school attendance (compulsory between the ages of 7 and 14 years). For this purpose, the staff attached to the Education Department consists of 19 Medical Officers, 19 Dentists (including 8 part-time Dentists), 8 Nurses, 15 Dental Assistants, and a clerical staff of 12.

Parents are notified of their children's defects, and are urged to have them treated. In the metropolitan district, children may be treated as out-patients at hospitals (general and special), or at the two School Dental Clinics. During 1923, the second School Dental Clinic was established at the out-patient department, Children's Hospital, chiefly to obtain strict oral and dental cleanliness before operations on the nose and throat.

In the country, in remote and sparsely-settled districts, defects of vision are provided for by two School Oculists. One of these is in charge of the Travelling Hospital, which now includes on its staff two Dental Officers, one Nurse, and one Dental Assistant. During 1923, the number of children examined by the staff of the Travelling Hospital was 3,598; 3,187 were treated for all defects, 2,853 of which were dental. The remaining nine Travelling Dental Clinics treated 14,614 children, and the School Dental Clinics in Sydney 6,465 (5,316 at the Metropolitan Clinic, and 1,149 at the Children's Hospital).

Of the 102,256 examined during 1923, 98,658 were seen during the routine medical inspection. Of these latter, 49,599 (50.2 per cent.) were notified for treatment of various defects, and of those notified, 26,712 (53.8 per cent.) were treated. This does not include the Travelling Hospital's returns, which are shown above, nor does it include the majority of those treated for dental defects by Departmental Officers, who carried out dental treatment for 23,932 children—17,467 rural and 6,465 city—or approximately 30 per cent. rural and 10 per cent. city of the children of the areas visited.

Eliminating dental defects, unremedied medical defects were found in 25 per cent. of children. In rural areas, 36 per cent. of those notified were treated by "outside" doctors or hospitals. In the city, 45 per cent. to 51 per cent. were treated for various types of defect. Much of this improvement is due to the excellent following-up work of the School Nurses.

During the three triennial periods ended 1922, 612,414 children were examined, and 355,765 (58 per cent.) were found to be suffering from physical defects requiring treatment. Only about 46 per cent. of these cases received treatment, but the parents or guardians of the remaining 54 per cent. made no attempts to secure alleviation.

In the triennium ended 1922, 185,770 children were medically examined (inclusive of those dealt with by the Travelling Hospital, but excluding those examined by the travelling dental clinics). Of this total 96,764 (52 per cent.) were recorded as defective. The chief defects were:—Dental, 74,476 cases; nose and throat, 25,152 cases; vision, 10,598 cases; and hearing, 5,029 cases. The number of children treated subsequently for any defect was 52,065.

In addition to the routine examination of primary school children, the examination of over 1,000 delinquent boys at the Metropolitan Children's Shelter is carried out by a Specialist Officer, and a physical and mental estimate provided for use of the Magistrate of the Children's Court.

The health supervision of High School girls in the Sydney and Newcastle districts is allotted to a special woman Medical Officer; while another woman Medical Officer is attached to the Teachers' College. Every teacher, on entering the College, is medically examined, and any defects found must be remedied. The teaching of hygiene is reinforced by the course of thirty lectures which each student receives at the Teachers' College.

No more interesting example of the demonstration of the importance of health exists than the work of the Infant Departments in teaching the "health game," and one very popular item of this is the regular monthly weighing of the scholars and the school feeding of milk now carried out for over 5,000 children.

During recent years, regular surveys are being made of the district incidence of such diseases as goitre, ophthalmia, and hookworm (School Medical Officers assisting in this latter campaign). A survey has been completed in regard to tuberculosis in school children, and surveys of mentally deficient and of crippled children are in progress.

3. *Victoria*.—The system of medical inspection aims at examining the child three times in its school life, but in the High Schools the students are examined every two years. After the examination, the parents are notified of defects and are advised to obtain treatment from their own doctor or dentist, and in the metropolitan area two nurses follow up these cases. Attached to the department is a dental centre which deals with about 600 children each month from the metropolitan schools.

During the year ended 30th June, 1924, 16,388 children were medically examined, and 6,337 received dental treatment. In addition, the nurses of the Bush Nursing Association examine the school children in their districts and report to the medical officers of the Education Department who, in their turn, advise whether medical attention is necessary.

The staff of the medical branch consists of four medical officers, two dentists, three dental attendants, and two school nurses. It is proposed to appoint an oculist.

4. *Queensland*.—In matters affecting the general administration of the medical branch of the Department of Public Instruction, the Department acts on the advice of the Commissioner of Public Health. There is no permanent professional officer in charge of the work, the medical inspection being carried out by part-time local medical practitioners who examine a large number of children each year, and advise parents of physical defects calling for medical attention. A staff of ten dentists carries out dental inspection and treatment. Particular attention is paid to diseases of the eyes and tonsils. In the Western Districts, where ophthalmic diseases formerly were rife, the medical officers in charge of district hospitals are employed to treat cases promptly and thereby prevent the spread of infection.

In 1924, 31,553 children were medically examined, of whom 5,237 were found to be suffering from physical defects. The departmental dentists examined 19,496 children. Extractions numbered 18,394, fillings 18,967, and other gratuitous treatments 8,053.

5. *South Australia*.—Medical inspection embraces the examination, three times in their school life, of all children attending the primary schools, and on entrance to a high or technical school, and the report to parents of defects likely to interfere with educational progress. The staff consists of one principal medical officer, five medical

inspectors, three dentists, five trained nurses, and a disinfecting officer. The dentists attend remote country schools and treat children. There is also a Dental Clinic where children from the metropolitan schools receive treatment. The Medical Inspector meets the parents after the examination of the children, reports any defect, and recommends treatment. It is found that a personal talk is of greater value than any written notice. A trained psychologist is attached to the medical branch.

Children to the number of 3,181 were examined by the medical officer, and a considerable number of defects was disclosed. The school dentist gave treatment to 1,887 children in the outback districts of the State.

6. **Western Australia.**—Under the Public Health Act 1911–1920, the medical officers of health appointed by the local authorities became medical officers of schools and school children. In the Health Department there is one medical officer for schools, whose duty it is to conduct medical examinations. During 1924, 6,037 children were examined.

7. **Tasmania.**—To Tasmania belongs the credit of being the first State in Australia to provide for the systematic medical inspection of State school children. As far back as 1906, 1,200 children from the Hobart State schools were examined. At the present time two part-time medical officers conduct examinations of school children in Hobart and Launceston. There are also four nurses, whose chief duty is to visit the homes to advise the parents as to the treatment of any defects disclosed by the medical examination. Country schools are inspected by two whole-time medical officers. Two dentists have been appointed to visit the country schools.

§ 7. Supervision and Care of Infant Life.

1. **General.**—The number of infantile deaths and the rate of infantile mortality for the last five years are given in the following table, which shows that during the period 1920 to 1924 no less than 41,519 children died before reaching their first birthday. With the exception of New South Wales and Tasmania for the year 1921, the rate of mortality in the metropolitan area has in every case been consistently greater than that for the remainder of the State. Further information regarding infantile mortality will be found in Chapter XXV.—Vital Statistics:—

INFANTILE DEATHS AND DEATH RATES, 1920 TO 1924.

State.	Metropolitan.					Remainder of State.				
	1920.	1921.	1922.	1923.	1924.	1920.	1921.	1922.	1923.	1924.
NUMBER OF INFANTILE DEATHS.										
New South Wales ..	1,693	1,437	1,292	1,431	1,299	2,051	1,981	1,665	1,846	1,866
Victoria ..	1,616	1,381	1,101	1,345	1,289	1,053	1,201	835	1,011	927
Queensland ..	446	382	347	362	367	835	719	660	716	644
South Australia ..	459	452	347	388	337	351	322	223	317	258
Western Australia ..	321	318	247	258	232	217	293	205	184	182
Tasmania ..	120	119	120	105	94	256	330	204	220	202
Australia (b) ..	4,655	4,089	3,454	3,889	3,618	4,763	4,856	3,792	4,294	4,079

RATE OF INFANTILE MORTALITY.(a)

New South Wales ..	74.03	62.38	57.68	63.26	57.18	66.01	63.01	50.81	58.70	60.22
Victoria ..	83.82	73.82	58.25	71.18	66.32	62.12	71.13	48.03	59.54	55.49
Queensland ..	70.39	61.81	57.10	57.89	57.76	59.98	50.82	44.96	52.15	48.22
South Australia ..	74.57	73.64	58.23	66.70	56.45	59.77	58.89	36.73	53.90	45.89
Western Australia ..	76.14	80.55	58.27	61.24	53.13	55.17	75.93	52.87	50.54	46.26
Tasmania ..	74.81	75.17	71.94	66.00	61.32	61.89	79.09	49.17	54.11	52.47
Australia (b) ..	76.99	68.62	58.33	65.48	59.92	62.78	63.48	48.50	56.69	54.79

(a) Number of deaths under one year per 1,000 births registered.

(b) Exclusive of Territories.

During recent years greater attention has been paid to the fact that the health of the community depends largely on pre-natal as well as after care in the case of mothers and children. Government and private organizations are, therefore, taking steps to provide instruction and treatment for mothers before and after confinement, while the health and well-being of mother and child are looked after by the institution of baby health-centres, baby clinics, crèches, visitation by qualified midwifery nurses, supervision of milk supply, etc.

2. Government Activities.—In all the States Acts have been passed with the object of supervising and ameliorating the conditions of infant life and reducing the rate of mortality. Government Departments control the boarding-out to suitable persons of the wards of the State, and wherever possible the child is boarded-out to its mother or near female relative. Stringent conditions regulate the adoption, nursing and maintenance of children placed in foster-homes by private persons, while special attention is devoted to the welfare of ex-nuptial children. (See also in this connexion Chapter XI.—Public Benevolence.) Under the provisions of the Maternity Allowance Act 1912, a sum of five pounds is payable to the mother in respect of each confinement at which a living or viable child is born. Further particulars regarding Maternity Allowance are given in Chapter VIII.—Finance.

3. Nursing Activities.—(i) *General.* In several of the States, the Government maintains institutions which provide treatment for mothers and children, while, in addition, subsidies are granted to various associations engaged in welfare work.

(ii) *New South Wales.* Baby health centres were established by the Government in 1914. Attached to each centre is an honorary medical officer and a staff of trained nurses who instruct mothers in matters pertaining to the care of themselves and their children. At the 30th September, 1924, there were 50 centres in operation, of which 28 were in the metropolitan area and the remainder in important industrial and rural centres. During 1924 the attendances at the clinics numbered 165,489, and the nurses paid 77,575 visits to homes. No charge is made for attention or advice.

The Royal Society for the Welfare of Mothers and Children has two training schools where nurses may receive post-graduate training in infant hygiene and mothercraft, and it conducts two welfare centres in the metropolis. The Day Nursery Association maintains three nurseries where working mothers may leave their children during the day.

The Bush Nursing Associations aim at providing fully-qualified nurses in country districts throughout Australia. Centres may be formed in any district where the residents can enrol sufficient members to guarantee the salary of a nurse. As the greater part of the nurses' work is that of midwifery, the nurses must be registered midwives. In January, 1924, there were 30 bush-nursing centres in New South Wales.

(iii) *Victoria.* The first Baby-Health Centre was opened in 1917. At the latest available date the Victorian Baby-Health Centres' Association had 53 centres in operation, 38 in the metropolitan area, and 15 in country towns. The Association receives subsidies from the State Government and the local municipal councils. During the year ended 30th June, 1924, attendances at the centres numbered 111,384, while 49,276 visits were paid by the nurses to patients in their own homes. The Society for the Health of Women and Children also maintains five centres in the industrial suburbs of the metropolis. There are, in addition, crèches where children may be left while the mothers are at work.

The Bush Nursing Association had in March, 1925, 46 centres in operation in the country districts. In connexion with this association there are three cottage hospitals in operation and others are in process of preparation.

(iv) *Queensland.*—Baby Clinics were established in Brisbane by the Government in 1918, and others have been formed in seven of the larger provincial centres. A training school has been organized to train nurses for welfare work. For the year 1924 attendances at the clinics numbered 52,876, in addition to which the nurses paid 13,926 visits in connexion with the after care of mothers and infants.

There are in the metropolitan area five kindergartens and five crèches where children may be left during the day. The Playgrounds' Association aims at providing playgrounds for children in the populous parts of towns and cities.

The Bush Nursing Association has seven nurses stationed in the country districts.

(v) *South Australia.* A School for Mothers is situated in Adelaide, and there are several branches in the suburbs, and at Port Pirie and Renmark. These schools receive a Government and municipal grant. During the year ended 31st July, 1924, the nurses paid 1,500 visits to expectant mothers and 21,096 to young babies. In August, 1921, baby clinics were established, to which in 1923-24 23,354 babies were brought for examination, advice and information being given where necessary to the mothers. There is a crèche at West Adelaide for the benefit of the children of women obliged to earn their own living.

The District Trained Nursing Society has over 30 branches, of which about half are in the metropolitan area. The nurses of this society paid 64,009 visits to homes. Nursing homes have been established by the Australian Inland Mission at Beltana and Oodnadatta in the far north of South Australia, and at three places in the Northern Territory.

(vi) *Western Australia.* The organizations which aim at improving the conditions of infant life include an ante-natal clinic established by the Government at the King Edward Maternity Hospital, a day nursery where children may be left and cared for while the mothers are away at work, and the Infant Health Association, which is subsidized by the government and local authorities, and which controls five centres, with a specially trained nurse in charge of each.

The Bush Nursing Trust maintains a rest-house for expectant mothers, and the Australian Inland Mission has nursing homes at Hall's Creek and Port Hedland.

(vii) *Tasmania.* There are three baby clinics in Hobart and two in Launceston controlled by Child Welfare Associations. During the year 1924, the nurses visited 7,265 homes, and attendances at the clinics for the same period numbered 11,498. The number of individual babies visited by nurses or attending the clinics was considerably greater than the total births in Hobart and Suburbs, and included the children of several country residents.

The Bush Nursing Association, which is subsidized by the Health Department, the Red Cross Fund, and municipal councils, has stationed nurses in twelve country districts.

INDUSTRIAL HYGIENE IN AUSTRALIA.*

§ 1. Introduction.

1. *Health Risks Associated with Industry.*—For centuries past certain physical and economic evils have been associated with labour and industry. Practically every kind of production has its peculiar health risk. Lead-poisoning is found among the workers of many trades. The chemical trades are characterized by obnoxious and poisonous fumes. Chemical compounds used in the manufacture of explosives give rise to serious skin and systemic effects. Miners, leather-workers, textile operatives, and workers in numerous other industries are liable to special risks, not the least of which are diseases of the lungs and respiratory tracts.

These dangers are recognized, but other insidious diseases sap the vitality of workers in occupations regarded as harmless. Any of the following conditions are definitely known to injure the health of the worker, provided exposure be sufficiently prolonged:—intense heat: sudden changes in temperature: glare: darkness: defective lighting: noise: speeding: heavy lifting: continuous sitting or standing: stagnant air: dampness. The dusts, gases and vapours generated, and the poisons used in the many trade processes also adversely affect the health of the worker, while danger to life and limb is involved in occupations where certain classes of machinery are operated.

2. *Industry as a Factor in Causation of Disease and Death.*—It is claimed that industry in general is one of the greatest factors in the causation of illness and premature death. Rusher, in an address in 1922 to the Royal Statistical Society on the subject of occupational morbidity drew the following conclusions:—(i) Age has the greatest influence on the rate of sickness, and next to this occupation; (ii) Occupation has more influence than has either locality or density of population, but the influence of these latter cannot be statistically dissociated from that due to occupation.

* Contributed by D. G. Robertson, M.D., D.P.H., Director, Division of Industrial Hygiene, Commonwealth Department of Health.

3. **The Prevention of Sickness and Accidents.**—The prevention of sickness and accidents among industrial workers, therefore, represents an important phase of public health, and, as with other public health problems, success calls for the co-operation of all parties concerned. It does not lie in merely imposing regulations upon the manufacturers, or in imposing varying sets of conditions upon the worker, but in the sensible observance of the facts and teachings of physiological science. The aim is to advance and develop the physical fitness and well-being of each individual.

To attain these ends the following measures are essential:—(i) Scientific enquiries into conditions of labour; (ii) Governmental legislation and enforcement; (iii) Employers' voluntary health measures; (iv) Education.

§ 2. Scientific Inquiries into Labour Conditions.

1. **General.**—In Australia, various Royal Commissions, committees, and individuals have made exhaustive researches into the questions of the effects of occupation on the health of the worker, and of discovering ways and means whereby these effects may be limited.

2. **Lead Poisoning, Broken Hill, 1893.**—An inquiry, presided over by Dr. J. Ashburton Thompson, was held in 1893 into the causes and means of prevention of lead poisoning at Broken Hill. This inquiry led to the inclusion under the Mines Inspection Act of 1901 in New South Wales of special regulations aiming at the prevention of plumbism amongst miners and smelter employees.

3. **Pneumoconiosis, Tuberculosis, and Pneumonia, 1902 to 1904.**—Many of these investigations have been made on the subject of the prevalence of pneumoconiosis and tuberculosis. In 1902, a Sewerage Ventilation Board in New South Wales inquired into the conditions under which miners were employed in sewerage works in and around Sydney, where deep tunnels and trenches were dug out of the sandstone, which was found to consist of from 81 per cent. to 94 per cent. silica. In 1904, a Royal Commission on Ventilation and Sanitation of Mines in Western Australia investigated the working conditions of the mines in that State, and though very few cases of miner's phthisis were recorded, the Commission considered it important to commence preventive measures, and suggested the appointment of a Mines Regulation Board to investigate health conditions.

4. **Tuberculosis at Bendigo, 1906.**—In 1906 Dr. Walter Summons investigated the ventilation of the Bendigo mines and the prevalence of tuberculosis in that city. The number of deaths among miners from tuberculosis was found to be six times as great as among adult males in Victoria generally.

5. **Various Investigations, 1907 to 1911.**—In 1907 another Sewerage Works Ventilation Board was appointed in Sydney. There followed in quick succession four separate inquiries into the mining industry, two Royal Commissions appointed in Western Australia in 1910 and 1911, a Royal Commission in Queensland in 1911, and an investigation by Dr. Purdy in Tasmania in 1910.

6. **Pneumonia at Broken Hill, 1912.**—In December, 1912, Dr. W. G. Armstrong, Senior Medical Officer of Public Health, New South Wales, made a local study of an epidemic of pneumonia which was said to exist at Broken Hill, and he reported that the death rate from pneumonia amongst underground miners at Broken Hill during the years 1910–1912 was 6.5 per thousand—nearly four times as great as the death rate from the same disease amongst all males in the State—while the death rate amongst females at Broken Hill during the same period was but slightly above that of all females in the State from the same cause. He also reported that the excessive mortality from pneumonia at Broken Hill was almost entirely amongst males, and chiefly amongst the silver miners, in whose work and habits of life the cause should, therefore, be sought.

7. **Royal Commission on Mining Industry at Broken Hill, 1914.**—On the 6th June, 1914, a Royal Commission was appointed to inquire into certain matters concerning the mining industry at Broken Hill, and, in its report, the conclusion was drawn that pneumonia was much more prevalent amongst miners than any other class in Broken Hill or in the State, and that it attacked miners more severely than any other classes of the community. With reference to pneumoconiosis, the Commission found it was practically unknown in

Broken Hill, but found also that tuberculosis was a disease to which miners at Broken Hill, as elsewhere, were peculiarly subject.

8. Board of Trade Inquiry, N.S.W., re Health of Metalliferous Miners, Rock Choppers, etc., 1918.—(i) *General*. In 1918 the New South Wales Board of Trade, at the request of the Government, inquired into the matter of the health of employees engaged in metalliferous mining and in the rock-chopping and sewer-mining industries, as well as in ore-treatment, refining and reduction works, and issued a full and comprehensive account of the ideas on the subject in the United States of America, Europe, South Africa, and Australia. The Board recommended the appointment of a Technical Commission of Inquiry to report on the question of dust, to examine air samples, and to study the cause of the disease, especially by radiographic methods.

(ii) *Inquiries by Technical Commission, 1919 to 1922*. This Technical Commission commenced its inquiry in December, 1919, and did not conclude until June, 1922. Complete physical examinations, including radiographic studies, were made of 6,538 persons who had been employed in or about the mines at Broken Hill. The Commission found that 266 persons showed signs of pneumoconiosis, 113 being in the first stage, 51 in the second stage, and 102 having pneumoconiosis complicated with tuberculosis; in addition 107 persons were found to be suffering from uncomplicated pulmonary tuberculosis. In 443 cases there was evidence of an altered state of the heart, kidney, or blood vessels, while 61 persons gave a history of having suffered from the effects of lead, and, on medical examination, furnished proof of injury to their health.

(iii) *Bureau of Medical Inspection, N.S.W.* The New South Wales Department of Labour and Industry established a Bureau of Medical Inspection to follow up the work of the Commission, the work of this Bureau comprising examinations under the Workmen's Compensation (Broken Hill) Act 1920, and the examination of applicants for employment in the Broken Hill mines.

In the two years ended 30th June, 1924, the Bureau found 142 new cases of either pneumoconiosis or tuberculosis or both, comprising 61 in the first stage, and 4 in the second stage of pneumoconiosis, 8 with tuberculo-fibrosis, and 69 with uncomplicated pulmonary tuberculosis. Under the Workmen's Compensation (Lead Poisoning—Broken Hill) Act 1922, the medical officer in charge of the Bureau acts as chairman of a Medical Board to deal with all applications for compensation for lead poisoning. The medical referee dealt with 46 cases up to the time the Board was constituted (May, 1923). Out of 22 referred to the Bureau for an opinion as to the presence of plumbism, 10 were found to have signs and symptoms. Up to June, 1924, the Board considered 99 cases; of these 37 were certified as being disabled by lead, 1 as susceptible, and 2 as having died from plumbism.

9. Tuberculosis at Bendigo, 1920.—In 1920 an inquiry into the prevalence of tuberculosis at Bendigo was made by Dr. D. G. Robertson, who found a greater incidence there than in other parts of Victoria, the preponderance to a great extent being due to the large proportion of the mining population suffering from the disease.

10. Pulmonary Disease amongst Silica Workers, N.S.W., 1924.—In 1924 the New South Wales Board of Trade, in conjunction with the Commonwealth Department of Health, conducted an inquiry into the prevalence of pulmonary disease amongst the workers engaged in silica in the Sydney Metropolitan District. A thorough physical examination with a radiographic study of the chest was made on every worker attending. Altogether 716 workmen were examined, and of these 123 were found to exhibit signs of silicosis, 47 being in the first stage, 38 in the second stage, and 38 with silicosis complicated with tuberculosis. In addition, 16 were found to be suffering from simple pulmonary tuberculosis.

11. Lead-poisoning at Port Pirie, 1910.—With regard to occupations other than mining or silica processes, in 1910, Dr. W. Ramsay Smith, Chairman of the Central Board of Health, South Australia, in accordance with a resolution of that Board, held an inquiry under "The Health Act 1898" into the occurrence and causes of lead-poisoning at Port Pirie. In his report, he stated that, as the disease was not a notifiable one, no complete statistics of the extent of the occurrence of lead-poisoning were available, but he estimated that during the three years 1907, 1908, and 1909, 150 to 200 cases of lead-poisoning occurred amongst people working in the smelting-works and amongst painters and those handling lead on the wharves.

12. **Lead-poisoning in Painting Industry, N.S.W., 1921.**—The New South Wales Board of Trade in 1921 conducted an inquiry into the dangers following the use of white lead in the painting industry. They found that lead-poisoning had a frequency of 16 per 1,000 deaths among painters as against 0.4 per 1,000 in the case of Australian bread-winners generally. The number of deaths per 1,000 from anæmia, diseases of the nervous system, Bright's disease, and diseases of the genito-urinary group, was greater among painters than among other Australian breadwinners.

13. **Royal Commission on Labour Conditions, N.S.W., 1912.**—In 1912 the New South Wales Government appointed a Royal Commission, with Mr. A. B. Piddington, K.C., as sole Commissioner, to inquire into the conditions of labour of women and juveniles in factories and shops in New South Wales.

14. **Report on Conditions in Clothing Trade, Melbourne, 1920.**—In 1920, at the request of Mr. Justice Higgins, President of the Commonwealth Arbitration Court, Mrs. Ethel Osborne conducted an investigation into the clothing trades in Melbourne. Her report dealt mainly with the question of hours and fatigue.

15. **Report on Conditions in Printing Trade, N.S.W., 1924.**—In 1924, Professor H. G. Chapman and Dr. S. A. Smith made an examination of 115 men engaged in the printing trade, and in their evidence before the Court of Industrial Arbitration, New South Wales, stated that the results of these examinations evidenced no signs of any specific risk in the printing trade.

16. **Report on Conditions in Flour-Milling Industry.**—(i) *Victoria, 1920 to 1922.* At the request of the Flour Mills Owners' Association, Dr. Walter Summons, in the years 1920–1922, conducted an inquiry into the healthiness or otherwise of the flour-milling industry in Victoria. One hundred and nine mill and 38 store employees were examined. He concluded, as a result of this inquiry, that flour-milling as carried on in Victoria with the aid of modern machinery has extremely little occupational hazard.

(ii) *Western Australia, 1922.* In 1922, at the request of the West Australian Flour Mill Owners' Association, Dr. D. M. McWhae conducted a similar inquiry in that State. He found that there was undoubtedly a tendency in mill workers to a catarrh of the upper air passage, but no evidence of a tendency to tuberculosis or fibrosis and emphysema of the lungs.

17. **Industrial Hygiene.**—(i) *New South Wales.* In 1923 the New South Wales Department of Health appointed a Medical Officer of Industrial Hygiene. This officer has already conducted several valuable investigations, and his evidence has been found of great assistance to the Judges of the New South Wales Court of Industrial Arbitration in determining the question of hours in industries in which definite risks to health have been proved to exist.

(ii) *Victoria.* The State Health Department of Victoria has placed the services of one of their medical officers at the disposal of the Labour Department, to whom all questions affecting the health of the worker may be referred.

(iii) *Commonwealth.* (a) *General.* The Commonwealth Department of Health in 1921 created a Division of Industrial Hygiene. In 1922 an inquiry was made by this Division through the Health Laboratory, Bendigo, which is equipped with a modern X-ray plant, into the prevalence amongst the miners there of pulmonary disease as disclosed by X-ray examination. The Division assisted in the work of the New South Wales Silicosis Commission, 1924.

Since its creation, the Commonwealth Division of Industrial Hygiene, with the assistance of Mr. Chas. H. Wickens, F.I.A., F.S.S., Commonwealth Statistician, has been engaged in the collection and study of the morbidity statistics of various government departments and private industries, in order to secure knowledge of the risks to health of the various occupations, and to permit comparison on a scientific basis with other similar callings.

(b) *Health of Victorian State School Teachers.* *Inter alia*, an inquiry was made into the health of Victorian State School teachers during the years 1914, 1920, 1921, and 1922. The number of teachers studied varied between 2,126 males and 3,223 females in 1914

and 2,276 males and 4,202 females in 1922, making about 6,000 in all each year. The following facts were deduced :—

(1) The average number of working days lost yearly through sickness by each teacher was 7.62; by each male teacher 5.00, and by each female teacher 9.09.

(2) The principal disease groups causing sickness were the epidemic, endemic and infectious diseases, the diseases of the nervous system and organs of sense, and the diseases of the digestive system.

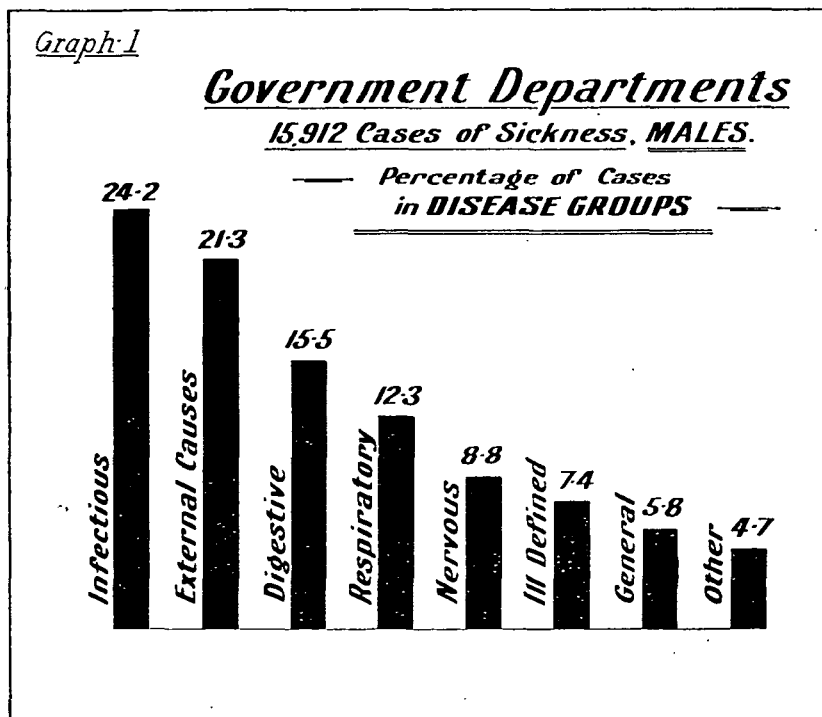
(c) *Morbidity Statistics in Taxation, Postal, and Railway Departments.* Another investigation made was a study of the morbidity history of the Central and Victorian Taxation Branches of the Treasury, and of the Victorian Postal Department. The 4,826 officers concerned in these three Departments had 51,167 days' sick leave in 1921, averaging 10.6 days per officer per annum. Females showed a considerable excess over males in amount of sickness. Respiratory diseases were accountable for as many as 8,659 days of sickness, or 16.9 per cent. of the total, but neurasthenia headed the list of individual diseases, being responsible for 5,306 days, or 10 per cent. A survey was also made of the sickness records during 1921 of the Victorian Railway employees (25,821 men). The total number of days' sick leave granted to these employees was 159,076, or 6.16 days per worker, and the average duration of sick leave was 17.26 days. The epidemic, endemic and infectious diseases accounted for 20,666 days, or 13 per cent. of the total, nervous diseases 17,186 days, or 11 per cent., and respiratory affections 16,928 days, or 10 per cent. Influenza was responsible for 9 per cent. of the total, and neurasthenia for 8 per cent. Accidents caused 45,096 days of absence, or 28 per cent. of the total, and of these nearly one-half were due to injuries of the lower limbs.

The following table gives a summary of the sickness analyses of the various government departments during the years 1920-1923 :—

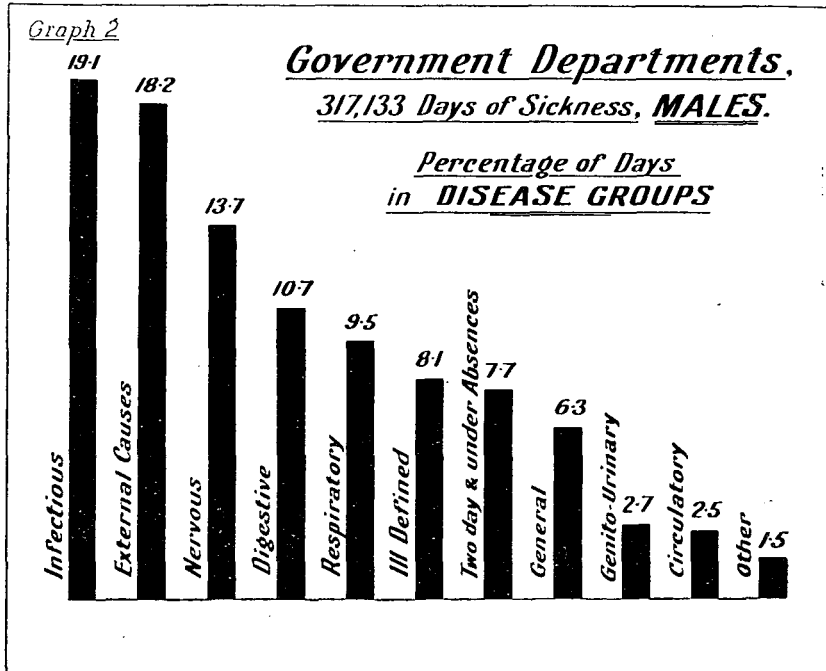
SICKNESS RETURNS—GOVERNMENT DEPARTMENTS, VICTORIA, 1920 TO 1923.

Year.	Number of Employees Examined.	Number of Employees Sick.		Total Days Lost.	Average Days Lost per Employee per annum.
		Number.	Percentage on Total Employees.		
MALES.					
1920	5,114	1,025	20	23,673	4.6
1921	41,362	14,024	34	268,237	6.5
1922	2,276	466	20	15,899	7.0
1923	21,989	13,244	60	171,876	7.8
1920-23 ..	70,741	28,759	40	479,685	6.8
FEMALES.					
1920	7,434	2,560	34	68,240	9.2
1921	9,481	4,176	44	108,427	11.4
1922	4,202	1,474	35	54,569	13.0
1923	3,386	2,785	82	46,441	13.7
1920-23 ..	24,503	10,995	45	277,677	11.3
PERSONS.					
1920	12,548	3,585	29	91,913	7.3
1921	50,843	18,200	36	376,664	7.4
1922	6,478	1,940	30	70,468	10.8
1923	25,375	16,029	63	218,317	8.6
1920-23 ..	95,244	39,754	42	757,362	7.9

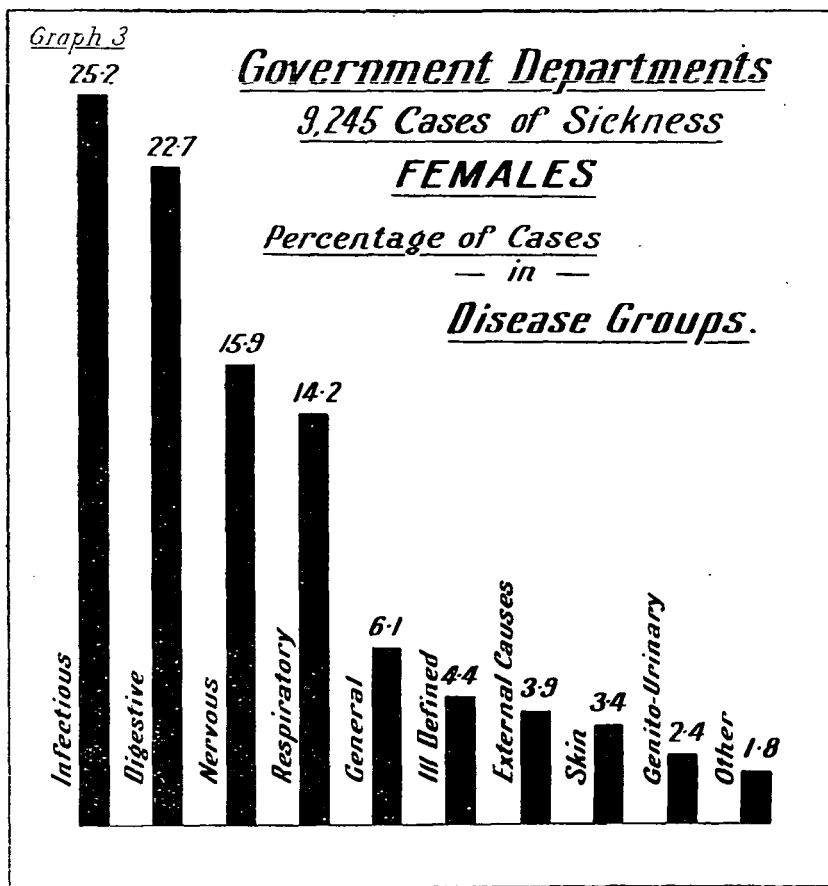
Graphs Nos. 1 to 4, herewith, give an analysis of the disease-groups responsible for certain of the absences of the officers in these Government Departments.



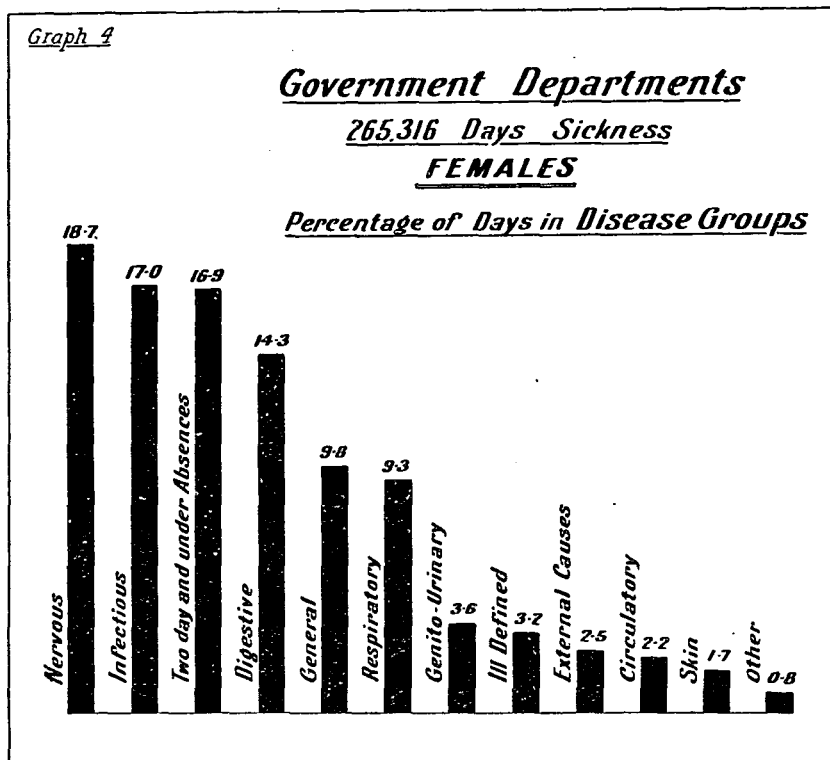
Graph 1 gives the percentages of 15,912 male cases of sickness in disease groups. Epidemic, endemic and infectious diseases were responsible for 24.2 per cent., external causes (injuries) for 21.3 per cent., diseases of the digestive system for 15.5 per cent., respiratory diseases 12.3 per cent., and diseases of the nervous system 8.8 per cent.



Graph 2 gives the percentages of the 317,133 days sickness in disease groups lost by the 15,912 cases referred to in Graph 1. Epidemic, endemic, and infectious diseases and external causes accounted for 19.1 per cent. and 18.2 per cent. respectively of the number of days lost. Diseases of the nervous system were responsible for 13.7 per cent. Two-day absences and under caused 7.7 per cent. of the total absences.



Graph 3 gives the percentages of 9,245 female cases of sickness in disease groups. Epidemic, endemic, and infectious diseases caused 25.2 per cent. of the cases, diseases of the digestive system 22.7 per cent., nervous diseases 15.9 per cent., and respiratory diseases 14.2 per cent.



Graph 4 gives the percentages of 265,316 days sickness in disease groups experienced by the 9,245 cases referred to in Graph 3. Nervous diseases caused 18.7 per cent. of the absences, infectious diseases 17.0 per cent., two-day absences and under 16.9 per cent. and digestive diseases 14.3 per cent.

(d) *Morbidity Statistics in Private Industries.* Returns of the sickness experience of their employees have, through the courtesy of the managements, been received by the Division of Industrial Hygiene from private industries in the States of New South Wales, Tasmania, and South Australia. Difficulty has been met with in the matter of the compilation of accurate statistics, and, until recently, when standard morbidity forms were supplied to the companies to enable records to be kept uniformly, the information obtained was, with one or two exceptions, of comparatively slight value.

The next table gives an analysis of the sickness and accident experience of the employees of a Smelting and Refinery Company, a Confectionery Factory, and a Municipal Council.

SICKNESS AND ACCIDENT RETURNS—VARIOUS NON-GOVERNMENT INSTITUTIONS.

Group of Employees.	Period.	Average Number of Employees.	Cases of Sickness and Accident.		Working Days Lost through Sickness and Accident.	
			Number.	Number per 100 Employees.	Number.	Average Number per Employee per annum.
MALES.						
Smelting and Refinery Co. 	11.8.23- 9.8.24	394	370	94	3,905	9.9
Confectionery Factory	Nov., 1923- Oct., 1924	281	291	103	1,259	4.5
Municipal Council ..	1923	3,536	2,081	58	30,179	8.5
FEMALES.						
Confectionery Factory	Nov., 1923- Oct., 1924	410	901	220	1,561	3.8
Municipal Council ..	1923	63	49	78	348	5.5

(e) *General Conclusions re Morbidity.* From the data available it appears that at least 6 days per annum are lost on the average by the breadwinner in Australia. This is equivalent to an incapacity of 2 per cent.—that is to say, out of the 2,340,000 breadwinners, 46,000 are incapacitated throughout the entire year. From the data given previously, it has been shown that a large percentage of this illness is due to preventable causes, and if, by the application to industry of the laws of hygiene, this amount of sickness could be reduced only by 1 day per worker per annum, a saving to the nation of the equivalent of the services of over 7,000 workers would result.

§ 3. Industrial and Health Legislation.

1. *General.*—The Australian States have closely followed the example set by English legislation, although in many respects they have lagged behind, and, as will be shown later, have not in some respects kept the legislation sufficiently advanced to conform with the requirements of modern medical knowledge.

2. *Victoria.*—(i) *Public Health Act of 1854.* “The Public Health Act of Victoria 1854” makes the first reference to factories, Section XI. giving power to Local Boards of Health to require occupiers of factories or buildings in which more than 20 in number are gathered to provide a sufficient number of water closets or privies.

(ii) *The Factories Act of 1873.* Victoria was the first colony in Australia to undertake manufacturing on anything like a large scale, and in 1870, 20,000 persons were so engaged. Under the stimulus of a protective tariff this number showed a large increase each year. No corresponding provision was made, however, for the accommodation of the new workers, and there existed a general disregard of cleanliness, a lack of sanitation, and, in many trades, an overworking of women and children. This state of affairs gave rise to serious public consideration, and in 1873 the Victorian Parliament passed "The Supervision of Workrooms and Factories Statute" (37 Victoria No. 466). The principal provisions of this Act were as follow :—

"The words 'factory' or 'workroom' shall mean any factory or workroom in which not less than 10 persons are engaged by an employer to work for hire or reward in preparing or manufacturing articles for trade or sale. No person or persons shall employ in any factory or workroom any female for more than 8 hours in any one day in preparing or manufacturing articles for trade or sale.

For the purpose of carrying out the provisions hereof any person authorized by the central or local board of health may enter and inspect any factory or workroom at any time during working hours. And the central or local board of health may from time to time make regulations (subject to the approval of the Governor in Council) respecting factories or workrooms, for the purpose of determining the maximum number of persons to be employed in any one room, also for enforcing provision for the necessary warmth, ventilation, and cleanliness therein, and further to order that all factories and workrooms shall be provided with proper sanitary requirements."

This Act was not found satisfactory.

(iii) *Royal Commission of 1883.* Following on a strike of tailoresses in 1882, the Melbourne press, through their reporters, made an examination of the factories in that city, and published accounts giving a vivid and fearless exposure of the evil conditions existing. It was shown that men were frequently compelled to toil for as many as eighteen hours and women for sixteen hours a day, and that the condition of outworkers was very undesirable. The Government thereupon appointed a Royal Commission to inquire into the working of the 1873 Act, and the inquiry began in 1883 and was completed in the following year. In its Report the Commission stated, amongst other things, that while considerable improvement had been made in the hygienic conditions of some of the factories, there was urgent need for more widespread effort in this direction, particularly as regards overcrowding, faulty ventilation, and the mixing of the sexes. Pointed attention was also drawn to the evils arising from the "sweating" system.

(iv) *The Factories and Shops Act of 1885.* The Report of the Commission referred to above was shortly followed by the introduction of a comprehensive measure entitled "The Factories and Shops Act 1885", which was on the lines of the English Act of 1878. It reduced the number of persons technically required to form a factory to 6, including apprentices, and made provision for ensuring cleanliness, air space, sanitation, and the requirements of decency, and for maintaining the health of the workers and their safety in life and limb. The employment of children under the age of 13 years was prohibited. A 48-hours week for females and males under 16 was prescribed, but this number of hours could be extended under special permission. The Act also required certificates of fitness to be obtained by persons under the age of 16 years before employment in factories, such certificates to be granted by certifying medical practitioners. The employment of persons under certain ages in certain factories and workrooms was prohibited, and without special permission boys under 14 years of age and girls under 16 years of age were not permitted to work in any factory or workroom between the hours of 6 p.m. and 6 a.m. Provision was made for the registration of factories, inspectors were appointed, and the administration of the law was placed under a special division of the Chief Secretary's Department. Notices of accidents of a specified severity were required to be sent to the inspector, and to the certifying medical practitioner of the district. The occupiers of factories were liable to a penalty of not more than £100 in cases where persons were injured by want of fencing to machinery, &c., the whole or any part of which penalty might be applied to the benefit of the injured person. This, however, did not deprive the injured persons of the right to recover damages in any Court of competent jurisdiction. The occupiers of factories were required to keep a record of all outside work done for them.

This Act dealt not only with factories, but with the hours during which shops might remain open for the sale of goods, and required seating accommodation or intervals of rest to be provided. Amending Acts were passed in 1887, 1890, and 1893, the last reducing the number of persons constituting a factory to four.

(v) *The Factories and Shops Act of 1896.* The Victorian Factories and Shops Act 1896 made a number of important amendments in the law, and introduced a number of entirely new provisions. It extended and amplified the legislation upon all the above-mentioned subjects. The term "factory" was extended to include every place in which furniture was manufactured, every place in which Chinese were engaged in laundry work, and all laundries where four persons were employed, excepting those carried on by charitable institutions. Ample powers were given to inspectors of factories who were authorized, when they found a factory or workshop in an unsanitary condition, to prosecute the responsible person, the chief inspector being given power also to condemn any factory or workroom which he considered dilapidated, unsafe, or unfit for use. The regulations governing the employment of children and young persons were made more stringent, females of any age, and boys under 16 years of age, were not permitted to be employed for more than 10 hours in a day, or after nine o'clock at night. The provisions of the English Act of 1888 for the protection of workers against accidents were in the main adopted. The names and addresses of outside workers were required to be registered with the chief inspector. The Act also dealt with the novel subject of regulating the wages of employees, whether engaged within or without a factory, and made large inroads upon the common law principle of freedom of contract. A minimum wage for the employment of any person in a factory was fixed, and the method for the fixing of the minimum wage to be paid for a maximum number of hours in any particular trade or industry to employees of different ages and experience was provided for in the power given to the Governor in Council to appoint Special Boards to determine such matters. (These provisions followed an experiment of the Parliament of New Zealand, which in 1894 passed an Industrial Conciliation and Arbitration Act creating a compulsory Court of Arbitration with power to make awards, including the fixing of wages and hours of labour. Provision was also made for District Boards of Conciliation, whose special function was to endeavour to bring about agreements in the earlier stages of trade disputes, and at the same time they were empowered to draw up recommendations for the settlement of all points at issue, including the duration of labour and rates of payment, such recommendations being subject to review by the Arbitration Court on the complaint of any party to the dispute.) A weekly half-holiday for shop assistants was also provided for, and a limitation upon the hours of work in shops imposed.

This important Act was, however, only placed upon the Statute Book as a temporary measure. Its provisions were renewed from time to time by further Acts, which also made a number of minor amendments in the law, in some cases extending the previous legislation, in other cases remedying defects in it. The Act of 1900 limited the working time of all males employed in shops to 52 hours per week, carters, porters, and night-watchmen alone being excepted. All these temporary measures came to an abrupt termination in 1902, when the sudden dissolution of Parliament rendered their provisions and the various acts done under them of no effect.

(vi) *Factories and Shops Continuance Act of 1902.* The new Parliament, however, speedily set matters right by the "Factories and Shops Continuance Act 1902." It continued the effects of all rules, regulations, orders, determinations, etc., made under the previous Acts, and revived the effects of those Acts themselves.

(vii) *Factories and Shops Acts of 1903-4-5.* The Act of 1902 was followed by the "Factories and Shops Act 1903," which continued the legislation to the end of the year 1905, and established a Court of Industrial Appeals, to consist of a Judge of the Supreme Court to hear appeals from and references by the Minister of Labour as to determinations of Special Boards. An amending Act was passed in 1904, and in 1905 all the previous Acts were repealed, and a consolidating Act, the "Factories and Shops Act 1905" enacted. An amending Act, the "Factories and Shops Act 1905, No. 2" made some alteration in the law chiefly with reference to the closing of shops and holidays to shop employees, and covered a number of defects in the previous Act.

(viii) *Legislation since 1905.* Sixteen further Acts have been passed since the Act of 1905 (No. 2). These Acts are as follows :—Factories and Shops Act of 1907 and 1909 ; Metropolitan Saturday Half Holiday Act ; Factories and Shops Act 1909 (No. 2), 1910, 1910 (No. 2), 1912, 1912 (No. 2), 1914, and 1915 ; White Phosphorus Matches Prohibition Act 1916 ; Factories and Shops Act 1919, 1920, 1920 (No. 2), 1922, (Fruit Shops) Act 1922.

(ix) *Provisions of Latest Acts in regard to Hygiene.* As regards hygiene, the principal features of these latest Acts are as follow :—

The Act of 1907 made provision for preventing or decreasing the danger or injury to health arising out of any process of manufacture, particularly as regards women, or persons under 21 years of age.

The Act of 1909 altered the interpretation of child from a person under the age of 13 years to persons under the age of 14 years for all male children, and 15 years for female children.

In the Act of 1909, No. 2, the definition of the term " factory " was widened, and the powers of inspectors increased. The ventilation of warehouses and shops was dealt with, and the use of white or yellow phosphorus in the making of matches prohibited.

In the Act of 1909, No. 2, provision was made for permission to be given to female children 14 years of age not required to attend school under the Education Act to be employed in factories.

In the Act of 1915 reference to the Board of Health for making regulations was deleted. The keeping of first-aid ambulance chests was made obligatory in factories where machinery is used. Girls under the age of 18 years were not permitted to lift or carry a weight greater than 25 pounds.

In the Act of 1919, it was enacted that the Minister may require the occupier of any factory, shop, or place to provide a dining-room for the use of employees, a bath-room for the use of employees, and a rest-room for female employees.

In the Act of 1922 the occupiers of factories may be called on by the Minister to provide suitable seating accommodation. The penalty for not providing guards, etc., for machinery was maintained, but the clause stating that this penalty may be used for the benefit of the injured person was deleted.

(x) *The Health Act of 1919.* The Victorian Health Act of 1919 gives power to the Governor in Council on the recommendation of the Health Commission to make regulations governing dangerous occupations. In 1923 the Dangerous Trades (Occupational Illnesses Notification) Regulations were made under this Act. These Regulations require every medical practitioner on becoming aware of any person suffering from certain occupational illnesses to forthwith send notification of the fact to the Chief Health Officer.

3. *South Australia.*—Although in some, if not in all, the other States, the need of factory and shop legislation was as urgent as in Victoria, the next State to pass a Factory and Shops Act was South Australia in 1894. This Act defined the number of employees necessary to constitute a factory as 4, it absolutely prohibited the employment of children under 13 years of age, and of any young person (boy or girl between the ages of 13 and 16 years) unless medically certified as physically fit. No young person or woman might be employed more than 5 hours at a stretch without being given an opportunity of obtaining a meal, nor might such be employed for more than 48 hours per week, except by arrangement with the factory inspector who might permit an extension to a maximum of 60 hours. The Act regulated the accommodation to be provided for employees, the safeguarding of machinery, the ventilation and cleanliness of workrooms and factories, and the prevention of overcrowding. An Early Closing Act came into force in South Australia in 1900.

4. *New South Wales.*—(i) *Report of Select Committee, 1876.* New South Wales was much slower than Victoria in taking steps to regulate the inspection of factories. In 1876 a Select Committee of the New South Wales Assembly was appointed to inquire into the employment of young persons " in trades . . . unsuited to their years ". In the report the Committee stated that young persons were to be found employed in brick-making working 10 hours a day excluding meal times, and that many of them were under 14 years of age. They also stated that there were boys and girls in factories working 10 hours daily in an unhealthy atmosphere, and that boys of 13 to 15 years were employed at the collieries. The Committee advised that legislation should be passed defining the

age at which children should be permitted to work at paid employments. The inspection of places where children were employed was also recommended. The Government ignored the Committee's report.

(ii) *Census and Industrial Returns Act of 1890*. In 1890 a "Census and Industrial Returns Act" was passed, under which the Government Statistician was empowered to report on the condition of factory and other employment in the colony. An exhaustive examination of the factories and workshops in all the centres of population was made during 1891 and 1892, the chief abuse found to exist being the almost uniform absence of provision for sanitation and for the preservation of decency. No immediate action followed on the reports issued by the Statistician.

(iii) *Factories and Shops Acts of 1896 and 1899*. In 1896 a Factories and Workshops Act on the lines of the Victorian Act, 1885, was passed. An Early Closing of Shops Act was introduced in 1899.

5. Queensland.—The Queensland Government appointed in 1890 a Commission of Inquiry into the condition of the workshops and factories, and this investigation disclosed an urgent need for legislation. A Factories Act was passed in 1896, closely resembling that of New South Wales. In 1900 a comprehensive Factories and Shops Act was passed which made provision with regard to early closing of shops, and embodied the most recent legislation of Great Britain and Victoria so far as it could be locally applied.

6. Western Australia.—Western Australia passed an Act for the Regulation of Factories, and an Early Closing Act in 1897. In the Factories and Shops Act Amendment Act 1923 certain provisions are made for regulating factories where lead, mercurial, or chemical preparations are manufactured. Power is given to the Governor to make regulations requiring periodical medical examinations of persons engaged in factories where lead, arsenic, or other poisonous substances are used, every employee to notify the occupier forthwith as to any symptoms which lead such employee to believe that he has contracted poisoning of any kind; the occupier to record such notification in a health register in the factory, and the occupiers of factories to take certain precautions, such as the provision of overalls, cloak rooms, etc., to protect the worker. In 1924 the administration of the Factories Acts was separated from the Health Department.

7. Tasmania.—In 1884 the Parliament of Tasmania passed the "Employment of Women and Children in Workrooms and Factories Act," which was modelled on the 1873 Victorian Act. Amending Acts were passed in 1900 and 1905. Under these Acts inspection was placed in the hands of police and health officials. In 1907 a Royal Commission recommended the introduction of factory legislation, and in 1910 the first Factories Act was enacted, and a Shops Closing Act in 1911. The administration of the Factories Acts was divorced from the Health Department in 1916.

8. Commonwealth Division of Industrial Hygiene.—(i) *General*. The Commonwealth Government, in establishing the Division of Industrial Hygiene, gave expression to its wish that all practicable means by which avoidable sickness or disablement can be prevented should be brought universally into operation in Australia. A study of the existing State legislation showed that in connexion with many important matters safeguarding the health of the worker there was considerable diversity in standards and practice.

(ii) *Conference with States, 1922*. In September, 1922, at the invitation of the Prime Minister, a conference of delegates from the State Health and Labour Departments and the Commonwealth Department of Health met in Sydney in an endeavour to arrive at a concerted basis of action and a uniform basis for standards and records.

The Agenda paper was as follows:—

1. Child Labour—Legislative provisions for the protection of young persons industrially engaged. Minimum age for employment. Certificates of fitness. Physical examination and re-examination of youthful workers. Certifying factory surgeons.
2. Female Labour—Restrictions against employment of females in certain specified trade processes. Restrictions against employment of females prior to and after confinement. General legislative safeguards.
3. Occupational Diseases—Notification of occupational diseases by medical practitioners.
4. Morbidity Statistics—Stimulation and standardization of morbidity statistics and accident statistics.
5. Hygienic Standards—Formulation of minimum hygienic standards.
6. Factory Hygiene and Inspection—Educational facilities for factory inspectors. Provision for medical inspectors of factories.
7. Medical Supervision of Persons Engaged in Industry.

The Conference adopted the following resolutions :—

(1) That all persons employed in factories and workshops should be medically examined before employment and in each year of employment until the person has completed his or her eighteenth year. That a certificate of fitness should be furnished on initial employment in each case at or under the minimum statutory age for employment.

That medical examinations should be made more frequently than annually if the medical examiner considers this necessary in any individual case.

That all medical examinations should be made by specially authorized medical officers.

(2) That standardized record cards for every examination performed should be kept by the medical examiners, and these records should be available at each re-examination.

(3) That the medical records of the Educational Departments should be available to the authorized medical inspectors in respect of any child seeking employment in factory or workshop.

(4) That it is desirable that the legislation in all the States prescribing the minimum age for employment be made uniform.

(5) That the minimum age for employment in factories and workshops be not under 14 years for boys and 15 years for girls.

(6) That the Division of Industrial Hygiene of the Commonwealth Department of Health take steps to acquire all available information necessary to enable recommendations to be furnished in regard to—

(i) The advisability of the reform and extension of the State Factories and Shops Acts in the following directions :—(a) The adoption of uniform restrictions against employment of females in specified trade processes; (b) The adoption of uniform restrictions against employment of females prior to and after confinement; (c) The adoption of uniform restrictions against heavy weight-lifting by females. The encouragement of labour-saving devices; (d) The provision of adequate seating, rest, and dressing-room accommodation for female employees; (e) The furnishing of returns indicating female labour turnover and absence from work.

(ii) The advisability of the appointment of female medical inspectors or other means of securing a more thorough supervision over female workers individually and collectively.

(7) That it is desirable that each State should have in effective operation legislation controlling occupations dangerous to the health of those employed therein.

(8) That all occupational diseases should be notifiable by medical practitioners, and that notifications should be made direct to the Health Department of the State.

(9) That factory medical inspectors should be appointed.

(10) That it is very desirable that there should be a collection of morbidity and accident statistics upon uniform lines, and that the Commonwealth Statistician be asked to draft a uniform scheme.

(11) That it is desirable that a committee should be appointed to draw up standards of qualification for factory inspectors and the nature of the course of study necessary before such qualification can be obtained.

(12) That the provisions of the Factories and Workshops Acts should extend to factories carried on or conducted by the Government or by any Local Authority as well as to factories otherwise carried on or conducted.

(13) This Conference considers that in view of the importance, as a phase of public health administration, of systematic medical supervision of the health of individual industrial employees, and of the valuable information and results which have been obtained from the introduction by private employers of a medical service for their establishments, all employers, including Governments, should be encouraged to provide an efficient and regular medical service which shall keep under review the health of the workers and shall inquire as to any relation between variations in health and conditions of employment. Moreover, in order to secure the greatest amount of public benefit from this measure, records of work done should be kept in a standardized method.

(14) That the Division of Industrial Hygiene of the Commonwealth Health Department, together with Mr. Murphy, Secretary, Department of Labour, Victoria, should be the committee to deal with the resolution relating to qualifications of factory inspectors.

(15) That the formulation of Hygienic Standards in industry be referred to the Division of Industrial Hygiene of the Commonwealth Department of Health.

(16) That all information obtained by the Division of Industrial Hygiene or by a committee in accordance with previous resolutions be submitted to a future conference for further discussion and for the formulation of recommendations in regard thereto.

It will be noted that certain matters were referred to committees, the information obtained to be submitted to a future conference for consideration.

(iii) *Conference with States, 1924.* A second conference was held in Melbourne in August, 1924, to consider the reports of these committees. The Agenda Paper read as follows:—

Report of the Division of Industrial Hygiene of the Commonwealth Department of Health on the following subjects :—

1. The advisability of the reform and extension of the State Factories and Shops Acts in the following directions :—

(a) The adoption of uniform restrictions against employment of females in specified trade processes.

(b) The adoption of uniform restrictions against employment of females prior to and after confinement.

(c) The adoption of uniform restrictions against heavy weight-lifting by females. The encouragement of labour-saving devices.

(d) The provision of adequate seating, rest, and dressing-room accommodation for female employees.

(e) The furnishing of returns indicating female labour turnover and absences from work.

2. The advisability of the appointment of female medical inspectors or other means of securing a more thorough supervision over female workers individually and collectively.

3. The formulation of standards on the following subjects :—Ventilation; Dust prevention (exhaust systems); Lighting; Dining-room accommodation; First-aid facilities.

Report of the Committee on the standards of qualification for factory inspectors, and the nature of the course of study necessary before such qualifications can be obtained.

The collection of morbidity and accident statistics upon uniform lines.

The legislative control of dangerous and unhealthy industries.

The notification of and payment of compensation for industrial diseases.

Consideration of the draft conventions and recommendations adopted by the International Labour Conferences.

The following recommendations were adopted :—

1. That the employment of females and young persons be restricted as follows :—

Occupation.	Persons to be Excluded.	
	Males.	Females.
1. Process of silvering of mirrors by mercurial process	Under 18 years ..	Under 18 years
2. Process of making white lead	Under 18 years ..	All
3. Continuous casting from molten lead in printing establishments	Under 16 years ..	All, except conditionally
4. Making of lead-headed nails	Under 18 years ..	All, except conditionally
5. Type-setting in printing office	Under 16 years ..	All, except conditionally
6. Lead glazing of pottery	Under 18 years, except conditionally	All, except conditionally
7. Casting of brass	Under 18 years ..	All
8. Manufacture of india-rubber and of articles and goods made wholly or partially of india-rubber	Under 16 years ; under 18 years, except conditionally	Under 18 years ; over 18 years, except conditionally
9. Process of bronzing	Under 16 years ..	Under 16 years
10. Dry grinding in metal trade	Under 16 years ..	Under 16 years
11. Process of melting and annealing glass	Under 16 years ..	Under 16 years
12. Cleaning machinery in motion	Under 18 years ..	All
13. Offensive trades (except soap and candles) .. ..	.. ..	Under 16 years
14. Making or finishing bricks or tiles, not being ornamental tiles .. ..	.. ..	Under 16 years
15. Making or finishing salt .. ..	.. ..	Under 16 years
16. Dipping of lucifer matches	Under 16 years ..	Under 16 years
17. Fustian cutting or in any grinding in the metal trade other than dry grinding	Under 16 years ..	Under 16 years
18. Laundry (machinery)	Under 16 years ..	Under 16 years
19. Manufacture of chromate and bichromate of potassium and sodium	Under 18 years ..	All
20. Wet spinning	Under 18 years, except conditionally	All, except conditionally
21. Processes which the Minister may notify as unhealthy (These should include all occupations with a definite lead hazard)	Under 18 years ..	All
22. Humid textile processes in which a humid atmosphere is continuously used	Under 16 years ..	Under 16 years

2. That no woman or girl shall work, and no occupier of a factory or workshop shall permit or require any woman or girl to work inside or outside any factory during the six weeks following her confinement.

3. That no woman or young person employed in a factory or workshop shall be permitted or required to lift or carry by hand a greater weight than is set forth in the following scale :—

Males—	
Under 16	30 lb.
Under 18	40 lb.
Females—	
Under 16	20 lb.
Under 18	25 lb.
18 and over	35 lb.

4. That—(a) Every occupier of a factory or shop shall cause to be provided, when the work can be done as well sitting as standing, suitable seats for the use of all persons employed in his factory or shop while at work :—(b) Every occupier of a factory or shop shall cause to be provided, when the work can only be done standing, suitable seating accommodation for all persons employed in his factory or shop in the proportion of one seat to every three persons employed. Such seating accommodation shall be conveniently situated for the use of the persons for whom the same is provided, and the occupier shall allow every person employed to use such seating accommodation at all reasonable times during the day, when such use would not necessarily interfere with the proper discharge by such person of his or her duties. (c) Such work seats, from the point of view of physiological benefit to the employee, and suitability for the particular work to be done, shall have been approved by the Chief Inspector of Factories.

(5) That a rest-room should be provided where there are 25 or more females employed, and for a less number if required by the Chief Inspector of Factories. If the room is intended for the temporary use of female employees needing a rest of an hour or two, and if it is not likely that there will be more than two or three occupants at the same time, the cubic space should be not less than 2,400 cubic feet, and a couch and two arm-chairs should be provided.

(6) That the occupier of any factory or shop where a change of the dress of any females employed is rendered necessary by the work to be done shall, if so required by the Chief Inspector of Factories, provide suitable dressing-room accommodation for such females.

The following provisions shall be observed with regard to the dressing-room accommodation :—(a) The dressing-room shall have at least 6 square feet floor space for each female so employed, and shall be situated adjacent to washing facilities. (b) Provision shall be made for the accommodation of—(i) Clothing put off during working hours ; (ii) Overalls and other protective clothing worn while at work. (c) Adequate arrangements shall be made for drying the clothing if wet. (d) If hooks or pegs are provided for hanging clothes, there shall be not less than two for each female employed, and they shall not be less than 18 inches apart ; if lockers are provided, there shall be not less than one for each female employed, they shall be at least 5 feet in height, 1½ feet in width, and 1 foot in depth, and ventilated at the top and bottom : such arrangements shall be approved by the Chief Inspector of Factories.

(7) That every occupier of a factory or workshop shall make such reports and furnish such returns as the Department of Labour may require for the purpose of collecting and compiling statistical information. The said occupier shall make such reports and furnish such returns within the specified time, and shall certify to the correctness of the same.

(8) That female medical inspectors of factories should be appointed.

(9) That the standards of ventilation tentatively submitted by the Division of Industrial Hygiene together with kata-thermometer observations, form the basis of an inquiry to be made in each State in the ensuing two years, and that the information so obtained be submitted to the next conference on industrial hygiene.

The Conference agrees that the study of air movement is of the greatest importance; and recommends the investigation of the various industries with a view to laying down suitable standards by the use of the kata-thermometer, or other means.

(10) That the recommendations of the British Factory Committee for the Statutory Regulation of Lighting in Factories and Workshops be adopted by all States.

(11) (a) When the number of employees in a factory exceeds six, the occupier shall, if required by the Chief Inspector of Factories, provide a separate room in which they may take their meals. (b) The lunch-room shall be of such a size and of such standards of cleanliness, lighting, heating, and ventilation as are approved by the Chief Inspector of Factories. (c) The lunch-room shall be provided with suitable tables and separate chairs for each employee. (d) Means of warming food and supplying hot water shall be provided. (e) That "factory" shall include Government factories and workshops.

(12) That each State adopt legislation requiring provision of ambulance and first-aid arrangements similar to those laid down in the Home Office Welfare Orders.

(13) (a) That all States agree to adopt a uniform standard of qualification for factory inspectors, and that the necessity for such a qualification be ensured by legislation or regulation wherever necessary. (b) That a biennial conference of Commonwealth and State representatives be instituted which could of itself, or by a Committee, determine and revise from time to time the qualifications and necessary courses of instruction.

(14) That all accidents occurring in factories should be reported to the Chief Inspector of Factories in the State concerned, and that in the annual report of the Chief Inspector of Factories the statistics as recommended by the International Conference of Labour Statisticians, Geneva, 1923, be furnished.

(15) That (a) a section, similar to that of the Act of Great Britain, be inserted in the Factories and Shops Acts giving power to make regulations for the safety of persons employed in dangerous trades, and prescribing the procedure for making such regulations. (b) Regulations, modelled on the British, be made for the specific industries concerned.

(16) That every State should adopt regulations requiring notification of industrial diseases. The diseases which should be adopted as notifiable are:—Poisoning by—Lead, Mercury, Arsenic, Phosphorus, Other minerals, Benzol or its nitro and amido derivatives (dinitro-benzol, aniline, and similar substances); Carbon Bisulphide, Nitrous Fumes, Carbon Monoxide, Cyanogen Compounds; Septic Poisoning; Chrome Ulceration; Dermatitis; Cancer (occupational); Compressed Air Illness; Mining—Nystagmus, Pneumoconiosis, Phthisis (miner's), Beat Hand, Beat Elbow, Beat Knee, Synovitis (wrist), Dermatitis.

(17) That every Australian State should afford compensation for industrial diseases, and that the diseases for which compensation is paid should be:—Poisoning by—Lead, Mercury, Arsenic, Phosphorus, Other Minerals, Benzol or its nitro and amido derivatives (dinitro-benzol, aniline, and similar substances), Carbon Bisulphide, Nitrous Fumes, Carbon Monoxide, Cyanogen Compounds; Septic Poisoning; Chrome Ulceration, Dermatitis; Cancer; Compressed Air Illness; Trade spasms and Cramps; Anthrax; Zymotic Diseases; Mining—Nystagmus, Pneumoconiosis, Miner's Phthisis, Beat Hand, Beat Knee, Beat Elbow, Synovitis (wrist), Dermatitis, Ankylostomiasis.

(18) That in view of the fact that the Railway Departments of the several States are the largest individual employers of labour, they should be on a similar footing to all other employers of labour in the Commonwealth in respect to the recommendations of this Conference.

9. State Activities since 1922.—(i) *Victoria.* In 1923, under power given in the "Health Act 1919," the "Dangerous Trades (Occupational Illnesses Notification) Regulations" were made. These have been referred to previously. Since 1922 the part-time services of one of the medical officers of the Health Department have been placed at the disposal of the States Labour Department. In 1925 the Labour Department appointed a female Medical Inspector of Factories and Shops, her duties being defined as follows:—(a) To investigate the effect of industrial conditions in factories and shops on the health of female workers, and, where necessary, to suggest remedial measures. (b) Where considered necessary, to examine female applicants under fifteen years of age for permits to work in factories. (c) To furnish reports when required, and to recommend action necessary to secure the health and well-being of female workers.

(ii) *New South Wales.* In 1923 the State Department of Health appointed a full-time Medical Officer of Industrial Hygiene, whose duties are to assist the State Department of Labour and Industry and the Court of Industrial Arbitration in matters concerning the health of the worker. In 1924 regulations under the Public Service Act were gazetted, prescribing certain educational qualifications for cadets and factory inspectors. These are referred to later under the heading of "Administration of Labour Legislation."

(iii) *Western Australia.* In the "Factories and Shops Act Amendment Act 1923," provision is made for the proper regulation, including periodical medical examination and occupational disease notification, of factories where lead, mercurial or arsenical preparations are manufactured. At the time of writing there is a Bill before Parliament to afford compensation to persons suffering from certain industrial diseases.

(iv) *Tasmania.* During the 1924–25 Session of Parliament, a Select Committee was appointed to investigate and formulate a scheme in connexion with the mining and metallurgical industries whereby those suffering from occupational diseases would be brought under the operations of the Workers' Compensation Act. This Committee made certain recommendations, and the Government has stated its intention of bringing forward legislation to give effect thereto.

10. Regulation of Wages and Terms of Contract.—Two systems, based upon different principles, exist in Australia for the regulation of wages and general terms of contract for employment. A "Wages Board" system exists in Victoria and Tasmania and at the Seat of Government of the Commonwealth of Australia, and an Industrial Arbitration Court in Western Australia and the Northern Territory. In the industrial legislation of New South Wales, Queensland, and South Australia both systems are embodied, Industrial Wages Boards as well as Industrial Courts being instituted. There is also the Arbitration Court of the Commonwealth, which has power, however, to deal only with matters extending beyond the limits of a single State. The chief aims of a Wages Board System are to regulate hours, wages, and conditions of labour and employment by the determination of a Board usually brought into existence for any specified industry or group of industries by petition or application. Under the "Industrial Arbitration Court System," an industry does not technically come under review until a dispute has actually arisen. The powers of the court are both numerous and varied; it hears and makes awards upon all matters concerning employers and employees.

The Court of Industrial Arbitration, New South Wales, has recently made two interesting awards. Certain hygienic standards have been prescribed, and working hours are reduced in establishments failing to comply with the conditions set forth. The awards in question deal with compositors and textile workers. An award made by the Arbitration Court of Western Australia in August, 1924, also sets forth certain hygienic precautions which must be observed in the trades of painting and signwriting.

The following awards indicate the breadth of jurisdiction of the Courts:—The Grave Diggers and Cemetery Labourers (Cumberland) Award, October, 1924, specifies "Each employee shall be entitled to sick pay during the period of his illness. Provided that in no case shall the total allowance in any year exceed twelve days' pay, and provided further that in all cases the employer may require the employee concerned to produce a medical certificate that he is unable to work, and, if such request is made and not complied with, the employer shall not be liable to make payment under this clause."

Rest-periods are prescribed under many awards. An example may be taken from the Brickmakers, etc., Northumberland, Award, November, 1924, where it is specified: "All females shall be granted a break of 10 minutes each morning between 9 a.m. and 10 a.m. for tea, and all female employees shall be allowed 10 minutes for washing and changing before knocking-off time. An interval of 7½ minutes in the morning and 7½ minutes in the afternoon shall be allowed to all employees engaged in brickmaking as "smoke-oh" in the employees' own time and not as part of their working time."

11. Employers' Liability and Workmen's Compensation Acts.—(i) *General.* In each of the States Acts have been passed allowing compensation as regards workers who have been killed or injured while engaged in industrial occupation. Two Commonwealth Acts have also been enacted, one providing for compensation to all workers employed by the Commonwealth, and the other to all seamen working on ships registered in Australia.

The Employers' Liability Acts imposed on the employer liability for accidents causing injury or death brought about by defects in works, plant, or machinery due to the employer's negligence, or negligently left unremedied by him, or caused by the similar negligence of his servants.

The Workmen's Compensation Acts impose a liability upon the employer to pay compensation to an injured workman, or to his dependents in case of death, independently of negligence on the part of the employer or of any one employed by him. The Acts of five of the States and of the Commonwealth specify that compensation shall be paid if in any employment personal injury by accident arising thereout in the course of the employment is caused to any worker. The Queensland Act provides that compensation shall be paid to all workers—or to their dependents in the case of death—who are injured by accident, whether at the place of employment or on the journey to or from such place or (being in the course of employment or while under employers' instructions) away from the place of employment. The Commonwealth Government has passed an Ordinance relating to Workmen's Compensation in the Northern Territory.

It is surprising that in the past little attention has been given in Australia to the collection and analysis of the facts of accident frequency in the different trades. Statistics have been available for some years in certain States regarding the number of fatal and

other accidents occurring among mining and factory employees, but the figures published represent but a tenth of the actual numbers injured and receiving compensation under the Workmen's Compensation Acts. Western Australia and Tasmania, in their annual reports on the operations of their respective Factories and Shops Acts, furnish no particulars whatsoever as regards accidents. Even with respect to injuries dealt with under Workmen's Compensation Acts, the statistical information available is very meagre. For example, the Government Statist of Victoria is unable to publish information regarding the number of claims and payments for accidents and industrial diseases in connexion with each occupation included in returns received from Insurance Companies transacting workmen's compensation business, without the consent of the Accident Underwriters' Association and the State Insurance Commissioner, nor in the returns he receives is the number of employees in each occupational group stated—the number injured, premiums received and payments made only being given. In Queensland, the employers are not required to state the number of their employees, as premiums are assessed on the wages paid; consequently the State Insurance Commissioner has no statistics as to the number of persons covered in the different occupational groups.

The collection of accident statistics upon uniform lines is an urgent necessity, and it is to be hoped that the recommendations of the International Conference of Official Labour Statisticians, Geneva, 1923, on this subject will soon be adopted in all States.

(ii) *Workers Injured and Compensation Paid.* (a) *General.* In the following table particulars are given as to the number of injuries and payments made under their respective Workmen's Compensation Acts, in the Commonwealth of Australia, and the States of Victoria, New South Wales, and Queensland.

(b) *Commonwealth.* Returns relating to numbers injured and compensation paid under the Act of 1912 for years 1913 to 1923 are given hereunder :—

COMMONWEALTH WORKMEN'S COMPENSATION ACT 1912—RETURNS 1913 TO 1923.

Year.	Number Injured.	Compensation Paid.	Year.	Number Injured.	Compensation Paid.
		£			£
1913 ..	240	1,056	1920 ..	851	10,755
1914 ..	370	5,724	1921 ..	708	11,066
1915 ..	1,218	6,917	1922 ..	707	9,021
1916 ..	846	7,805	1923 ..	845	7,090
1917 ..	834	6,532			
1918 ..	774	7,566			
1919 ..	739	6,944	Total ..	8,132	80,476

(c) *Victoria.* The consent of the members of the Accident Underwriters' Association of Australia and of the State Insurance Commissioner having been given, the Government Statist has supplied the following information regarding injuries and payments made under the Victorian Workers' Compensation Act for the years 1920 to 1923 :—

WORKERS' COMPENSATION ACT, VICTORIA—RETURNS, 1920 TO 1923.

Year.	Number Injured.	Compensation Paid.
		£
1920	11,646	108,009
1921	11,410	104,854
1922	11,907	108,154
1923	12,822	147,852

(d) *New South Wales.* The Department of Labour, New South Wales, has issued the following table giving a comparison of the number of accidents occurring and the compensation paid under the Workmen's Compensation Act during the period 1913 to 1923 :—

WORKMEN'S COMPENSATION ACT, NEW SOUTH WALES—RETURNS, 1913 TO 1923.

Year.	Employees Covered.			Accidents.		
	Males.	Females.	Total.	Death.	Disablement.	Total.
1913 ..	77,088	3,774	80,862	52	6,217	6,269
1914 ..	120,707	2,384	123,091	65	6,386	6,451
1915 ..	94,046	3,782	97,828	52	5,854	5,906
1916 ..	83,825	6,399	90,224	52	5,277	5,329
1917 ..	95,006	15,325	110,331	34	4,787	4,821
1918 ..	126,333	25,824	152,157	69	11,708	11,777
1919 ..	190,109	28,658	218,767	115	11,987	12,102
1920 ..	188,563	28,826	217,389	104	13,133	13,237
1921 ..	202,164	32,476	234,640	120	16,267	16,387
1922 ..	198,484	36,679	235,163	101	17,258	17,359
1923 ..	204,224	37,906	242,130	90	18,860	18,950
1913-23 ..	1,580,549	222,033	1,802,582	854	117,734	118,588

Year.	Compensation.			Percentage of Accidents to Employees.		
	Death.	Disablement.	Total.	Accidents Resulting in Death.	Accidents Resulting in Disablement.	Total.
	£	£	£			
1913 ..	4,797	39,237	44,034	0.06	7.6	7.7
1914 ..	15,256	38,201	53,457	0.05	5.1	5.2
1915 ..	12,073	32,498	44,571	0.05	5.9	6.0
1916 ..	12,431	39,671	52,102	0.05	5.8	5.9
1917 ..	12,724	39,634	52,358	0.03	4.3	4.3
1918 ..	22,314	95,070	117,384	0.04	7.6	7.7
1919 ..	41,206	117,027	158,233	0.05	5.4	5.5
1920 ..	38,407	133,283	171,690	0.05	6.0	6.1
1921 ..	39,762	224,872	264,634	0.05	6.9	7.0
1922 ..	39,672	250,168	289,840	0.04	7.3	7.3
1923 ..	34,067	256,778	290,845	0.04	7.8	7.8
1913-23 ..	272,709	1,266,439	1,539,148	0.05	6.5	6.6

(e) *Queensland.* The following figures regarding the operation of the Queensland Workmen's Compensation Act are given in the annual reports of the State Government Insurance Office:—

WORKMEN'S COMPENSATION ACTS, QUEENSLAND—RETURNS, 1916-17 TO 1922-23.

Year.	Number of Accidents.			Compensation.
	Fatal.	Permanent Injury.	Temporary Injury.	
1916-17 ..	122	314	6,148	£ 117,291
1917-18 ..	147	416	7,816	165,358
1918-19 ..	156	411	8,219	172,782
1919-20 ..	152	430	8,967	215,400
1920-21 ..	152	513	9,513	222,327
1921-22 ..	231	498	8,589	260,963
1922-23 ..	146	501	10,824	273,385
Totals 1916-23 ..	1,106	3,083	60,076	1,427,506

12. *Economic Loss by Accidents.*—In Victoria and New South Wales employers are not liable to pay compensation for injuries which incapacitate for less than one week, and in Queensland for injuries disabling for less than three days. In the preceding tables, such accidents have not been included, but it would appear that in Australia at least 6 per cent. per annum of all workers covered by the provisions of the Workmen's Compensation Acts receive disabling injuries entitling them to compensation.

This represents a huge annual economic loss to the nation, as each industrial accident means that at least one of its producing units is converted temporarily or permanently into a non-producer.

The amount paid in compensation does not represent the only financial loss through accidents. The employer, through his premiums, is compelled to bear practically the whole cost of the working of the Compensation Acts, and, in addition, he has to defray any legal expenses involved. The employee with temporary injuries has to suffer a reduction in income, and, in cases of permanent injuries, is deprived of earning power. Apart from the pain and suffering involved, and the hardships so frequently inflicted on the family of the injured, everything possible should be done to lessen or obviate entirely the causes of injury, as compensation after all is a poor substitute for health and physical ability.

With the exception of "The Workers' Compensation Acts of 1912 to 1920" of Western Australia, which allow medical attendance up to £1, the injured worker is not reimbursed the cost of medical and hospital fees entailed by reason of his accident.

13. Workers' Compensation in the United States of America.—In increasing numbers the States of America are amending their compensation laws to afford the relief just mentioned to the workers, and the position in this respect at the end of 1922 is shown in the next table.

It will be noted that many of the States hedge these benefits with limits ranging from 2 weeks to 90 days in time, or from 50 to 300 dollars in amount, while in others the payments are not restricted. The payment of medical and hospital fees incurred by the injured worker has been an undoubted factor in improving the medical service rendered. Many insurance companies have established clinics for the treatment of injuries, and employ the highest surgical or medical talent available. They have found that skilled service promptly given more than pays for itself by cutting short the period of disability and preventing the need of reconstructive surgery later. Furthermore, many industrial concerns have been enabled to engage the full-time services of competent medical men to take charge of the surgical treatment of injuries, the medical attention of occupational diseases occurring in their plants, and the other duties carried out by an industrial physician, without any expense to themselves, the rebate on the compensation premiums being more than sufficient to cover the entire cost.

MEDICAL SERVICE UNDER WORKMEN'S COMPENSATION ACTS, UNITED STATES.

State.	Time.	Amount.	State.	Time.	Amount.
Alabama ..	60 days ..	\$100	New Jersey ..	(a)	(a)
Arizona ..	No provisions		New Hampshire ..	No provisions	
California ..	(a)	(a)	New Mexico ..	14 days ..	\$50
Colorado ..	60 days ..	\$200(b)	New York ..	(a)	(a)
Connecticut ..	(a)	(a)	North Dakota ..	(a)	(a)
Delaware ..	30 days ..	\$100(c)	Ohio ..	(a)	\$200(g)
Georgia ..	30 days ..	\$100	Oklahoma ..	60 days ..	\$100(g)
Idaho ..	(a)	(a)	Oregon ..	(a)	\$250(i)
Illinois ..	8 weeks ..	\$200(d)	Pennsylvania ..	30 days	\$100(j)
Indiana ..	30 days(e)	(a)	Rhode Island ..	8 weeks ..	\$200
Iowa ..	4 weeks ..	\$100(f)	South Dakota ..	12 weeks	\$150
Kansas ..	50 days ..	\$150	Tennessee ..	30 days ..	\$100
Kentucky ..	90 days ..	\$100	Texas ..	2 weeks ..	(a)
Louisiana ..	(a)	\$150	Utah ..	(a)	\$150
Maine ..	30 days (g)	\$100(g)	Vermont ..	14 days ..	\$100
Maryland ..	(a)	\$300	Virginia ..	60 days ..	(a)
Massachusetts ..	2 weeks(g)	(a)	Washington ..	During period of comp. payment	
Michigan ..	90 days ..	(a)	West Virginia ..	(a)	\$150(k)
Minnesota ..	90 days ..	\$100(g)	Wisconsin ..	90 days(g)	(a)
Montana ..	2 weeks ..	\$100	Wyoming ..	(a)	\$200
Nebraska ..	(a)	(a)			
Nevada ..	90 days (h)	(a)			

(a) Signifies unlimited service. (b) Also \$100 for dental service. (c) Additional service upon application approved by the Board. (d) Necessary additional expense in hospital cases. (e) Additional 30 days may be allowed by the Board. (f) Additional \$100 in exceptional cases. (g) Limits extended at discretion of Commission in unusual cases. (h) May be extended to one year by Commission. (i) Limits \$100 for hospital accommodation, \$100 for medical and surgical service, and \$50 for medicines and supplies, including transportation. (j) In addition to the cost of hospital service for 30 days. (k) Increased to \$300 in special cases.

14. Occupational Diseases and Compensation, Australia.—Two of the States of the Commonwealth—Western Australia and Tasmania—have not as yet provided for the payment of compensation to sufferers from occupational diseases, nor is this provision made in the Commonwealth Workers' Compensation Act.

OCCUPATIONAL DISEASES FOR WHICH COMPENSATION IS PAYABLE— AUSTRALIA, 1924.

NOTE.—Diseases compensated marked X.

Disease (or Poisoning by)—	State.			
	New South Wales.	Victoria..	Queens- land.	South Australia.
Anthrax	X	X	X	X
Lead	X	X	X	X
Mercury	X	X	X	X
Arsenic	X	X	X	X
Copper	X	..	X	..
Zinc	X	..	X	..
Phosphorus	X	X	X	X
Other Mineral .. .. .	..	..	X	..
Septic Poisoning (Handling Meat)	X	X	X	..
Zymotic Diseases (Hospitals) .. .. .	..	..	X	..
Baker's Phthisis .. .. .	..	..	X	..
Miller's Phthisis .. .. .	..	..	X	..
Benzene, Nitro and Amido Derivatives	X	..	..	..
Carbon Bisulphide	X	..	..	..
Nitrous Fumes	X	..	..	..
Nickel Carbonyl	X	..	..	..
African Boxwood	X	..	..	..
Chrome Ulceration	X	..	..	..
Dermatitis	X	..	..	..
Cancer (Pitch or Tar)	X	..	..	..
Cancer (Chimney-Sweep's)	X	..	..	..
Glanders	X	..	..	..
Caisson	X	..	X	..
Mining—				
Nystagmus	X	..	X	..
Silicosis	X	..	X	..
Beat Hand	X	..	X	..
Beat Knee	X	..	X	..
Beat Elbow	X	..	X	..
Synovitis (wrist)	X	..	X	..
Dermatitis .. .. .	..	..	X	..
Itch (Miner's or Copper) .. .. .	..	..	X	..

New South Wales has in addition three other Acts relating to workmen's compensation, viz., "The Workmen's Compensation (Silicosis) Act 1920," the "Workmen's Compensation (Broken Hill) Act 1920," and "The Workmen's Compensation (Lead Poisoning—Broken Hill) Act 1922."

15. **Occupational Diseases, New South Wales.**—Returns regarding diseases, occupation, cases, and compensation, for the period 1920-23, are set out hereunder.

OCCUPATIONAL DISEASES—RETURNS, NEW SOUTH WALES, 1920-1923.

Disease.	Employment.	Number of Cases.	Compensation.
			£
Lead Poisoning	Building	15	2,529
" "	Manufacturing	20	1,669
" "	Mining	263	64,859
" "	Transport	3	184
	Professional and Shop Workers	1	1,000
	Public Utility Services..	1	444
	Total	303	70,685
Dermatitis	Chemical	2	22
Nystagmus	Mining	42	6,889
Anthrax	Transport	1	28
"	Grazing	1	16
	Total	2	44
Arsenic Poisoning	Smelting	1	3
GRAND TOTAL .. ..	.. ..	350	77,643

16. **Occupational Diseases, Victoria.**—Returns regarding disease, cases, and compensation for the period specified are given hereunder.

OCCUPATIONAL DISEASES—RETURNS, VICTORIA, 1918-1923.

Disease.	Number of Cases.	Compensation.
		£
Anthrax	4	523
Lead Poisoning	12	654
Arsenic Poisoning	2	22
Septic Poisoning	88	759
Total	106	£1,958

17. **Occupational Diseases, Queensland.**—The number of claims presented under the various diseases is set out in the following table :—

OCCUPATIONAL DISEASES—CLAIMS, QUEENSLAND, 1918-19 TO 1922-23.

Disease.	Claims.	Disease.	Claims.
Mineral Poisonings ..	93	Mining Diseases—	
Anthrax	3	Phthisis	539
Septic Poisoning	4	Cellulitis	8
Typhoid Fever	2	Caisson	20
Influenza	50	Dermatitis	3
Total	152	Total	570
		GRAND TOTAL	722

18. **Mining Legislation.**—(i) *General.* Acts governing the conditions of employment in mines are in force in each of the States. The employment underground of all females and of boys under 14 years of age is prohibited. A minimum age, usually 17, is fixed for employment as lander or bracedman at plats and landing places. No lander, bracedman, underground worker, or man in charge of motive power may be employed more than 8 hours a day. Various provisions for the protection of the lives and health of miners are contained in the Acts. These provisions include measures for the adequate ventilation of mines, for dust control, lighting, sanitation, the provision of ambulance chests and stretchers, and the reporting of accidents.

Provision is made to enable injured persons or the relatives of persons killed to recover damages if the injuries result from a breach of the regulations, while inspection of the mines is fully provided for. In two of the States reduction of hours where the working conditions are unfavourable to health is provided for.

(ii) *New South Wales.* The "Workmen's Compensation (Broken Hill) Act 1920" requires the medical examination of all mine workers. (The Western Australian Government in 1922 passed an Act for the physical examination of all metal miners and for the exclusion of tuberculous miners from underground work. This Act has not yet been placed into effect.)

"The Mine Inspection Act 1901" of New South Wales gives power to the Governor to make regulations for the prevention of lead poisoning, and regulations have been made accordingly.

Following the example set by English legislation, "The Mines Accident (Rescue and Aid) Act 1913," a Mines Rescue Bill was placed before the New South Wales Assembly on the 12th November, 1924. The Bill proposes to provide for rescue operations in coal and shale mines by the establishment, equipment, and maintenance of rescue stations and rescue corps. The mine owners shall pay brigade-members for time taken up in training and duties at not less than the rate of pay for first class shiftmen at the mine concerned. The Governor may, under the provisions of the Bill, define mining areas, and establish central rescue stations towards the establishment and maintenance of which mine owners shall contribute on the basis of not more than one penny a ton on all coal won in the mines. At the time of writing this measure had not yet been passed by the New South Wales Assembly.

(iii) *Tasmania.* Under "The Mines and Works Regulation Act 1915," regulations are prescribed for smelting works, whether carried on in connexion with mining operations or otherwise. The provisions are on similar lines to the regulations under "The Mine Inspection Act, 1901" of New South Wales.

19. **Workmen's Accommodation and Workers' Homes Acts.**—(i) *Shearers' Accommodation Act, N.S.W.* In 1901 the Parliament of New South Wales passed the "Shearers Accommodation Act," which provided for the proper and sufficient accommodation of persons employed in or about shearing sheds in the shearing of sheep or in work connected therewith. This accommodation included sleeping accommodation in buildings separate from the shearing shed, a dining room, proper cooking and washing vessels, a good drinking water supply, and latrines. This Act was adopted later by the other States.

(ii) *Workers' Accommodation Acts, Queensland.* In Queensland, the "Workers' Accommodation Acts" of 1915 to 1921 apply not only to shearing sheds, but also to construction works, meat works, pastoral occupations, sawmills, sugar works, and such works as the Governor in Council may from time to time by order in council declare.

(iii) *Workers' Homes Acts.* With the exception of New South Wales and South Australia, the States have passed Workers' Homes Acts providing for advances out of monies voted by Parliament, on prescribed securities to persons in receipt of an income below a prescribed sum for the purpose of enabling them to erect dwelling houses. The Commonwealth Government under the power conferred by the Northern Territory Acceptance Act 1910 and the Northern Territory (Administration) Act 1910 adopted the "Workmen's Dwellings Ordinance 1919."

20. **Unemployment Insurance Act, Queensland.**—In 1922 the Queensland Government passed "The Unemployed Workers' Insurance Act," which established an "Unemployment

Insurance Fund" to which contributions are made by the workers, employers, and the Government. Measures having for their object the remedying of unemployment are also prescribed.

21. The Commonwealth of Australia Navigation Act, 1912-1920.—The Australian Navigation Act represents an important advance in the field of industrial hygiene. The Accommodation Division of the Act requires in vessels of the Australian mercantile marine the provision of 140 cubic feet with a minimum floor space of 18 square feet for each man who lives in the space, irrespective of the space provided for mess-rooms and bath-rooms. Standards for ventilation, lighting, bunks, mess-rooms, sanitary arrangements—including properly constructed bath-rooms with washhand basins and showers, to which hot and cold fresh water are made available, and hospitals—have been prescribed. As a result, the conditions on board Australian ships have been brought into line with modern ideas of sanitation. The responsibility of examining the vessels concerned and specifying the alterations necessary in each case to bring the conditions into conformity with statutory requirements has been undertaken by officers of the Commonwealth Department of Health, who for the purpose have been appointed Medical Inspectors under the Navigation Act.

Under the "Health" Division of the Navigation Act, the examination of seamen by Medical Inspectors has been arranged. Scales of medical stores and books of instruction suitable for different classes of ships and voyages have been prescribed. Provision has been made that where a seaman or apprentice belonging to a ship registered in Australia is left on shore in any place in Australia owing to illness or injury in service of the ship, he shall be entitled, if landed at his home port, to wages during his illness and for one week after recovery, with a maximum of 3 months' wages in all. If landed at a port other than his home port, he is entitled to maintenance, medical expenses, and a free passage with wages to his home port. Other sections place the liability on the owners of British vessels for medical attendance, medicine, and maintenance of the master, seaman, or apprentice should he—(a) receive any hurt or injury or contract disease in the service of the ship; or (b) suffer from any illness which is not a venereal disease, and not due to his own wilful act or default, or to his own misbehaviour.

Foreign-going ships, or Australian trade ships on a voyage between consecutive ports of call which exceeds the prescribed distance (650 miles), and which have on board 100 or more persons, are required to carry as part of their complements a duly qualified medical practitioner. Where the number on board is less than 100 but more than 10, then if a medical practitioner is not carried, a person competent to render "first aid" must form one of the ship's complement.

The scale of provisions to be provided to every member of the crew is set out in the schedule.

22. Administration of Labour Legislation.—(i) *New South Wales.* The Department of Labour and Industry administers the Acts, and has charge of the matters specified in the statement hereunder :—Agreements Validating Act 1902 : Apprentices Act 1901 and Apprentices (Amendment) Act 1915 : Early Closing Acts (Principal and Amending) No. 38, 1899, 81, 1900, 29, 1906 (Hairdressers), 23, 1910, 64, 1915 (Butchers), No. 49, 1919 : Eight Hours Act 1916 : Eight Hours (Amendment) Act 1920 : Electric Light and Gas Emergency Act 1917 : Industrial Arbitration (Further Amendment) Act 1918 : Industrial Arbitration (Amendment) Act 1919 : Industrial Arbitration (Amendment) Act 1920 : Municipal Council of Sydney Electric Lighting (Amendment) Act 1920 : Returned Soldiers and Sailors Employment Act 1919 : Saturday Half-holiday Act 1910 : Scaffolding and Lifts Act 1912 : Factories and Shops Act 1912 : Gas Act 1912 : Gas (Amendment) Act 1918 : Gas (Amendment) Act 1920 : Industrial Arbitration Act 1912 : Industrial Arbitration (Amendment) Act 1916 : Industrial Arbitration (Amendment) Act 1918 : Shearers' Accommodation Act 1901 : Supply of Electricity (Variation of Agreements) Act 1920 : Trade Unions Re-registration Act 1920 : White Phosphorus Matches Prohibition Act 1915, No. 1 : Workmen's Compensation Act 1916 : Workmen's Compensation (Silicosis) Act 1920 : Workmen's Compensation (Amendment) Act 1920 : Workmen's Compensation (Broken Hill Act) 1920 : the reception and investigation of complaints alleging non-compliance with industrial laws : the regulation of industries by the enforcement of all subordinate legislation under the Industrial Arbitration Acts : the maintenance of a centre of public intelligence with regard to industrial law, and certain economic features of industries : the publication of the *Industrial Gazette* : the social problem of

unemployment: the regulation of private labour agencies, and the control of State-aided immigration: State agencies for—general labour exchange purposes, the provision of labour for Government works, the training of youths for rural employment, the relief, shelter, and provision of temporary occupation for the unemployed and for workers suffering from disabilities.

For the purpose of discharging its responsibilities the Department is organized in the following sections:—(1) Ministerial: (2) New South Wales Board of Trade: (3) Special Commissioner for Conciliation: (4) Industrial Registrar: (5) State Labour Exchange and Immigration: (6) Chief Inspector of Factories and Investigation Officer: (7) Departmental Engineer and Chief Inspector of Scaffolding and Lifts: (8) Gas Examiner.

Country offices are located at the undermentioned centres:—Broken Hill, Goulburn, Lismore, Newcastle, Orange, Tamworth, Wagga Wagga, Wollongong.

In the Factories Department there are 35 inspectors, i.e., 29 males and 6 females, of whom 25 males and 5 females are engaged as factory inspectors and 5 as early closing and industrial inspectors.

(ii) *Victoria.* The Labour Department administers the Factories and Shops Acts, the Servants' Registry Offices Acts, the Lifts Regulations Act, and the Footwear Regulations Act.

The Metropolitan area is divided into 17 Districts, and the Country area into 9 Districts, with head-quarters at Bendigo (2 Inspectors), Ballarat, Geelong (2 Inspectors), Warrnambool, Dandenong, Seymour, Maryborough.

There are 31 male and 7 female full-time inspectors, including 2 inspectors of lifts, and 1 inspector of machinery, who control the whole of the State, and 1 inspector who supervises the carters and drivers. No special qualifications are required of inspectors before appointment. The duties of the inspectors are to inspect factories and shops, and to see that the provisions of the Factories and Shops Act and Regulations and Determinations of Wages Boards are complied with.

In the country districts 273 police officers have been appointed as Inspectors of Factories, and receive a gratuity of £6 to £12 per annum, based according to population.

Before a certificate of registration is issued for a factory, approval must be given by the local council, and thus the assistance of the council's officers is obtained.

In special cases the assistance of professional officers of the Public Health Commission is obtained.

(iii) *Queensland.* The Department of Labour administers the "Labour Employees Act of 1915," the "Factories and Shops Acts 1900 to 1922," the "Industrial Arbitration Act of 1916," the "Workers' Accommodation Acts 1915 to 1921," the "Trade Unions Act of 1915," and the "Unemployed Workers' Insurance Act of 1922."

The administrative districts are of two classes, viz.:—(a) those under the whole of the provisions of the Acts, and (b) those subject to the provisions of the Acts relating to the early closing of shops only. There are 14 whole Act districts and 111 early closing districts. The whole Act districts are as follows:—Brisbane, Bundaberg, Charters Towers, Cairns, Dalby, Gympie, Ispwich, Maryborough, Mackay, Mt. Morgan, Rockhampton, Townsville, Toowoomba, Warwick. The number of inspectors is—Brisbane, 12 male, 3 female; Country Districts, 16 male, 2 female.

There is no prescribed standard of qualifications for inspectors. In addition to being inspectors of factories and shops, these officers are industrial inspectors. In Brisbane the majority of them have some particular trade knowledge, and supervise industrially that trade and allied trades.

Male inspectors inspect all factory and shop premises as to sanitation, ventilation, general cleanliness, and generally as to compliance with the requirements of the Factories and Shops Acts; they also examine wages rolls, time-sheets, etc., in order to satisfy themselves that all awards under "The Industrial Arbitration Act" are being strictly observed. The wages rolls and employees' cards are inspected to insure that the requirements of the Unemployed Workers' Insurance Act are being observed, reports on breaches or irregularities are furnished, prosecutions are conducted, and conferences held with employers regarding disputes, matters of interpretations of awards, etc. Senior country inspectors also act as Labour Agents and administer the Labour Exchanges Act. Female inspectors do practically the same work as male inspectors, but act exclusively in relation to female employment.

In country districts, where there is not a full-time inspector, the local officer in charge of police holds the appointment of Inspector of Factories and Shops, but this applies in early-closing districts only, there being full-time inspectors in all whole-Act districts. Ten inspectors under "The Workers' Accommodation Act" also nominally hold the appointment of Inspector of Factories and Shops and Industrial Inspector.

(iv) *South Australia.* The Factories and Steam Boilers Department administers the following Acts :—The Industrial Code 1920 : the Early Closing Acts 1911–1923 : the Steam Boilers and Engine-drivers Acts 1911–1923 : the Lifts Regulations Acts 1908 : the Scaffolding Inspection Act 1908 : the Employees Registry Offices Act 1915 : the Footwear Regulation Act 1920.

The Industrial Code 1920 is at present applicable to the metropolitan area only, and for departmental convenience this area has been sub-divided into districts.

The Early Closing Acts 1911–1923 are applicable to certain proclaimed districts in the State, and also to the metropolitan shopping district, whose boundaries are the same as those of the metropolitan area. The metropolitan shopping district is also sub-divided for departmental reasons.

The list of inspectors comprises—One Chief Inspector: five male Inspectors of Factories and Steam Boilers: one male Inspector of Factories and Lifts: three male Inspectors of Factories and Shops: two female Inspectors of Factories and Shops: one Inspector of Factories and Shops and Acting Scaffolding Inspector: one Inspector of Scaffolding.

In addition, there is one Inspector of Factories and Steam Boilers resident at Kadina, but this officer acts only as Inspector of Boilers except when he may be required to take some action under the provisions of the Industrial Code 1920.

The duties and qualifications prescribed for Inspectors of Factories and Steam Boilers are as follow :—To inspect, advise necessary repairs, determine the working pressure, and keep records of boilers inspected; to assist steam users in the economical use of steam. Applicants should possess a general mechanical knowledge and sufficient training to be able to advise proper safeguards for machinery, and be competent to examine and report on applications for Enginedrivers' Certificates. The successful applicants must not be more than 40 years of age.

The duties and qualifications of Inspectors of Factories and Shops are :—To inspect non-machinery factories and shops under the provisions of the Industrial Code and Early Closing Acts, and to administer Industrial Court Awards and Industrial Board Determinations. Applicants should possess a reasonable amount of experience of working conditions in factories and shops, considerable tact in dealing with employers and employees, keen observation, and be able to write accurate reports.

The Inspectors of Factories and Steam Boilers are appointed after an examination pursuant to the provisions of the Steam Boilers and Engine-drivers Acts.

Officers administering the Industrial Code 1920 administer all its provisions over which an inspector has jurisdiction, such as the clauses relating to the provisions of the Industrial Court Awards and Industrial Boards Determinations, sanitation, ventilation and lighting of factories, fire appliances and means of egress, safeguarding of machinery, overtime restrictions and working hours of boys and females, and all similar provisions.

The administration of the Early Closing Acts in country districts does not require the services of a whole-time officer, therefore certain Government officials stationed in the district have been appointed registrars and inspectors. The majority of these officials are police officers, while, in the larger districts, the clerks of the local court act as registrars and inspectors.

Where, in the ordinary course of the duty of an inspector, a flagrant breach of the Health Acts is observed, the Health Authorities are advised accordingly.

(v) *Western Australia.* The Department of Labour administers "The Factories and Shops Act," "The Employment Brokers Act," "The Shearers Accommodation Act," and it is probable that "The Inspection of Scaffolding Bill," which at the time of writing was before Parliament, will also be placed under its charge.

All that portion of the State which is north of 26° of South latitude is exempted from the operations of the Factories and Shops Act 1920. The remainder of the State is divided into "Shop Districts," which in some instances comprise Electoral Districts, in others Municipal and Road Districts combined, and in others Road Districts only.

Four male and one female full-time inspectors are at present employed, but it is hoped that two additional male inspectors will be appointed at an early date.

No special qualifications for inspectors are prescribed, but candidates are required to demonstrate, before appointment, that they possess a knowledge of hygiene and sanitation and of the various industrial laws administered by the Department. Two inspectors were appointed as a result of competitive examination, and the others hold either one or more certificates of the Royal Sanitary Institute of Great Britain.

The duties of male inspectors are (a) To examine premises or buildings which are used or intended to be used as a factory, and to report on their suitability or otherwise from the points of view of stability, general construction and layout, ventilation, lighting, drainage, general sanitation, fire escapes and fire prevention, and compliance generally with the various requirements of the Factories and Shops Act and of Acts relating to public health; (b) To inspect periodically, and report on factories in which male workers are employed, with the object of securing compliance with all the requirements of the laws above referred to; (c) To advise and assist occupiers of factories on matters relative to the introduction or adoption of means or methods tending to secure the health and comfort of and improve the efficiency of workers in factories; (d) To investigate complaints and enforce compliance with Awards and Industrial Agreements made under the provisions of the "Industrial Arbitration Act 1912" in so far as they apply to factories, shops, and warehouses; (e) To inspect shops and warehouses with the object of securing sanitary and hygienic conditions of employment for workers therein; (f) To secure compliance with the provisions of "The Employment Brokers Act 1909," "The Shearers Accommodation Act 1917," and "The Footwear Regulation Act"; (g) To institute and conduct proceedings in the police courts for offences against any of the Acts administered by the Department.

The duties of the female inspector are similar to those of the male inspector, with the exception that her activities are confined to establishments in which females are employed, and she does not conduct prosecutions.

Assistance in administering the Acts specified is rendered by police officers (principally in country districts), and in a minor degree by sanitary inspectors employed by local Health Authorities.

(vi) *Tasmania.* The Industrial Department is charged with the administration of the following Acts:—The Factories Acts 1910–1917; the Wages Board Act 1920; the Shops Closing Acts 1911–1913; the Footwear Act 1918; the Workers' Compensation Acts 1918–1921.

The Department also conducts Labour Bureaux at Hobart and Launceston.

The State is not divided into districts for administrative purposes, but is administered as a whole. The Department, however, has a branch at Launceston, and towns adjacent thereto are inspected by the officers from that branch.

There are 3 full-time inspectors, namely, 1 senior inspector and 2 inspectors.

There is no standard of qualification required for appointment.

The duties of the inspectors are:—To make examination and inquiry to ascertain whether the provisions of the Factories, Wages Boards, Shops Closing, Footwear, and Workers' Compensation Acts and Regulations thereunder and all Health laws are complied with, and any other duties they may be called upon to perform by the direction of the Chief Inspector of Factories.

The Local Authorities assist in inspecting factories in their municipalities, and members of the police force also enforce the provisions of the Shops Closing Act.

(vii) *Mining Acts.* The Mining Acts in the different States are administered by Departments of Mines, each of which maintains a staff of inspectors.

In New South Wales, the Mine Inspection Act 1901 prescribes that every inspector shall hold a certificate of competency or of service as manager granted under this Act or approved by the board of examiners of managers. The Coal Mines Regulation Act 1912 states "every inspector shall hold a first-class certificate of competency or service, as provided in this Act with regard to managers."

Under the Mine Inspection Act 1901 the subjects of the examination for a certificate of competency for mining manager are as follow:—(a) The laying-out and construction of shafts, chambers, main drives or levels, adits, uprisers, and stopes; (b) The timbering of shafts, adits, main drives or levels, passes, stopes, and generally the system of timbering mines and filling up old workings; (c) The ventilation of mines; (d) Tapping water in

mines, and the mode of constructing dams in underground workings to keep water back ; (e) Blasting, and the use of explosives ; (f) Pumping appliances, and the drainage of mines ; (g) Haulage in shafts, and on underground planes ; also the strength of haulage ropes and chains ; (h) The effect that faults, slides, and mullock bars have on lodes and how to ascertain the direction of slides and heaves ; (i) A knowledge of underground surveying, and of making plans of underground workings, showing the dip or inclination and strike of the reef or lodes ; (j) A knowledge of the different rocks in which gold, silver, copper, zinc-blende, tin, lead, antimony, and precious stones are found ; (k) Ore dressing, sampling, mill and battery work ; (l) Arithmetic ; (m) A knowledge of the Mines Inspection Act 1901 (oral).

Under the Coal Mines Regulation Act 1912 the subjects of the examination for first-class certificates as manager are as follow :—(a) Arithmetic, the elementary rules, use of decimals and vulgar fractions, and extraction of square root ; (b) Surveying and levelling, use and care of dumpy level and theodolite, construction of plans and use of scales, principles and practice of mine surveying ; (c) Geology, elements of, and knowledge of the coal measures in the candidate's district ; (d) Machinery, boilers, and other structures in use at coal mines, systems of haulage, pumping and sinking, practical elementary electricity ; (e) Theory and practice of ventilation, and nature of and properties of gases met with in mines, and of the precautions against danger from the firing of coal-dust ; (f) The winning and working of coal and shale ; (g) Knowledge of the Coal Mines Regulation Act 1912 and Amending Acts ; (h) Knowledge of "First Aid to Injured" in regard to treatment of fracture, arrest of bleeding, restoration of apparently drowned or suffocated, and the proper conveyance of the injured.

23. **International Labour Conference, Geneva.**—(i) *Resolutions.* The following resolutions were passed at the Fifth Session of the International Labour Conference, Geneva, 1923 :—

"That, in view of the complexity of modern industrial processes and machinery, of the character of the executive and administrative functions entrusted to the inspectors in connexion with the application of the law, and of the importance of their relations to employers and workers and employers' and workers' organizations and to the judicial and local authorities, it is essential that the inspectors should in general possess a high standard of technical training and experience, should be persons of good general education, and by their character and abilities be capable of acquiring the confidence of all parties."

"That inspectors on appointment should undergo a period of probation for the purpose of testing their qualifications and training them in their duties, and that their appointment should only be confirmed at the end of that period if they have shown themselves fully qualified for the duties of an inspector."

(ii) *Action taken in Australia.* With the exception of New South Wales, the States of Australia have not enforced standards in accord with the foregoing resolutions.

In 1924 Regulations were issued under the Public Service Act of New South Wales. Mr. W. I. Taylor, Chief Inspector of Factories, and Investigation Officer, New South Wales, in an article "Educational and Technical Status of Inspectors," appearing in *Health* of November, 1924, describes these regulations as follow :—

"It was decided to reorganize the inspectorate to allow of each inspector being rendered competent to properly perform most, if not all, of the manifold tasks which would confront him in his daily round, proper provisions being made for the appointment, in due course, of experts in certain callings, e.g., chemistry, hygiene, and architecture. Considerable time and thought were devoted to the matter, and eventually regulations were framed and gazetted, comprising a standard, which, if properly followed, must, in a few years, advance factory inspection methods in this State to a standard equal to anything elsewhere.

"To begin with, the cadet system was established, and applicants for appointment as cadets must have passed the Intermediate Certificate Examination, and have completed a term of apprenticeship at an engineering, electrical engineering, or other satisfactory and appropriate trade, or hold the Technical College Certificate in at least one of the above subjects (coupled with workshop experience), or in architecture, building construction, or industrial hygiene. Applicants must

not be more than 23 years of age, and successful applicants are appointed at a commencing salary of £250 per annum. The Intermediate Certificate Examination referred to is that enjoined upon students after three years' work in a Secondary or High School, and embraces Latin, French, English, history, physics, chemistry, business principles, arithmetic, algebra, geometry, and elementary trigonometry, etc.

"It may, therefore, be safely considered that the educational status for even the primary grade of inspectorship is satisfactorily provided for. After gaining this qualification, a full term of apprenticeship at one of the specified trades will provide a technical status, which experience has proved to be absolutely necessary for the work. Alternatively, the Technical College Diploma of this State can only be gained after thorough study and much practical work, and the budding inspector can qualify in one of the professions or trades outlined. Upon this sure foundation he commences his training in the internal practice and procedure of the Department. Later, he will accompany a senior inspector upon his daily rounds, and commence his examination of factory plants and processes. Then he will begin to mingle theory and practice, and will be able to note factory construction and fire prevention, hygiene in all its branches, and to learn something about toxins. If he has embraced that part of the curriculum involving engineering, he will soon be at home in the science of safeguarding machinery, and, if he has trained in one of the professions, he will soon add to such knowledge, by experience, the most efficient methods of rendering the machinery safe to the operatives. By adding experience to his educational status, he will thus more readily become fully competent to advise in problems of industry.

"It will, of course, take time to receive the value of the cadet system, and, meantime, vacancies that may occur must be filled to keep the inspectorate at normal strength, and this contingency is provided for by a further regulation, which provides that no person shall be permanently appointed to the inspectorial staff unless he or she has the qualifications set out hereunder—(a) *Male Applicants* : A First or Second Class Board of Trade Marine Engineer's Certificate, or approved Technical College Certificate in Engineering or Electrical Engineering, or satisfactory qualification (by examination) in architecture, chemistry, or industrial hygiene ; (b) *Female Applicants* : A Technical College Certificate in Industrial Hygiene and Sanitation, or an approved equivalent, and must have had satisfactory experience in factory organization and management or welfare work.

"The commencing salary of an inspector shall be—Males (other than cadets), £342 16s. 6d. per annum ; Females, £240 per annum.

Exception may be made in the case of appointments requiring special technical qualifications, or of an officer transferred from another Department of the Service.

"Here, again, will be noted the opportunity to select, as circumstances warrant, suitable males trained in the specified profession or trades. Holding closely to the principle, and for the reasons hereinbefore stated, that training in the engineering sections provides the best material to work upon, it will be possible to recruit the staff from persons skilled in such trades. Educational advantages, personality, and intelligence will, of course, be necessary adjuncts, and these qualifications, plus the technical knowledge, will clothe an applicant with a status which can be amplified steadily in the training process which will follow appointment. The new appointee's initial training will follow the lines indicated for cadet inspectors. Having assimilated departmental indoor practices, he will commence inspection work in company with a senior inspector, and, later, when considered competent, he will be given charge of a factory district.

"Similar opportunity is provided to appoint a male officer qualified in architecture, chemistry, or industrial hygiene. In the nature of things, such appointment would be for special work, and such appointee would be available to assist other inspectors in the particular professions in which he had qualified. Conversely, when not engaged upon special work, he would have opportunity of acquiring knowledge in the phases of inspection work with which he was not conversant, the aim being, as stated, to have each inspector trained, as nearly as possible, to an all-round standard.

"The duties of female inspectors are similar to those of male officers, save with respect to machinery and requirements in building construction, with which they have no vital concern, save to report to the male officer for the district any obvious non-conformity with the Act. The number of female officers is limited, but additional female officers appointed must have satisfactory educational and technical qualifications.

"Both male and female appointees are required, after serving about two years in the inspectorate, to pass a departmental examination before progressing beyond a certain salary point, and such examination is directly applicable to their every-day work.

"Before senior rank can be attained, a severe higher grades' examination must be passed by males in the subjects of industrial hygiene, building practice, mechanics, machine construction and drawing, economics (Clay), and the modern factory (Price). Females are also required to pass an additional examination in departmental practice and procedure. Obtaining senior rank entitles a male inspector to proceed beyond a salary of £432, and a female inspector beyond £330. No further restrictions are imposed, and inspectors may proceed to salaries allotted by either the Salaries Committees or the Public Service Board.

"The work of the inspectors is overlooked by superintending inspectors, of whom there are two, one principally employed "inside" and the other "outside." the office. By these means a complete oversight is established, and assistance rendered, where necessary, to allow the inspectorate being, in every sense, composite and self-contained."

§ 4. Health Measures Provided by Employers.

1. *Need for Industrial Medical Services.*—It has been proved that on every working day of the year at least 2 per cent. of the workers are absent through sickness, a large proportion of which is due to preventable causes. This sickness is responsible, therefore, for a substantial overhead charge in all industrial establishments. For example, the salary list for permanent Commonwealth Government officers for the financial year ended 30th June, 1923, amounted to nearly £6,000,000; of this sum no less than £132,000 represented payment for sick leave. There are, therefore, sound national reasons why industry should bear its share in raising the country's standard of health, and industrial medical service affords a way without undue meddling or interference with individual rights, or restrictions of liberty. There are, of course, many influential factors causing ill health that cannot be controlled within the place of work, but it is well within the powers of employers to insure a high standard of health within their own organization.

2. *Provision of Medical Service by Employers.*—(i) *General.* Employers are compelled under the various labour laws to comply with certain specified hygienic standards for working conditions. Inspection of the larger industrial establishments in Australia proves that the managements fully realize their responsibilities in this direction, and in numerous instances the standards observed are far superior to those required by the law. Further than this, in increasing numbers Australian employers are providing medical service to their employees, believing that the health, comfort, and contentment of the worker are vital factors in production, and in the development of a stable, efficient, working force. They recognize that the prevention of sickness and accidents is good business management, since workers physically or mentally below par cannot be expected to yield full value for a full day's wage.

In 1922-23, only 660 out of the 19,173 factories in Australia—or 3.4 per cent.—engaged over 100 hands, but in these 660 factories 169,867 persons, or 41 per cent. out of a total of 412,410 were employed. It follows, therefore, that if every establishment engaging over 100 hands instituted a system of medical service, two-fifths of the persons employed in factories would be kept under surveillance.

(ii) *Response to Questionnaire forwarded by Commonwealth Health Department.* In October, 1924, a questionnaire was addressed by the Commonwealth Department of Health to the larger employers of labour throughout Australia asking for particulars regarding their systems of medical service, if any, for the benefit of their employees.

From the replies received, and other sources of information, it would appear that the position in Australia with respect to this matter at the beginning of 1925 was as follows:—

The full-time services of 8 physicians are engaged by 5 establishments, a department store employing 1, a government railways 1, another government railways 3, a water supply and sewerage board 1, and the Commonwealth Government 2 (1 in Melbourne and 1 in Sydney).

Thirty other establishments engage physicians to attend at their institutions at certain fixed times during the day. These establishments comprise the following:—2 water supply and sewerage boards; 4 biscuit or confectionery factories; a clothing factory; 3 department stores; 2 gas companies; 2 lead works; a meat works; 2 mining companies; a motor-body building works; a newspaper office; a photographic supplies factory; 3 government railways; 2 rubber works; 3 municipal tramways; a refining and smelting company, and a cordite factory.

Thirty-three establishments employ full-time nurses, 23 of these being fully-trained female nurses. Seventeen of these establishments also engage full-time or part-time physicians, and are included in the above; the 16 organizations that have a nurse only comprise a boot factory, a clothing factory, a match factory, a motor-body building works, a piano-maker, 2 printing works, 2 tobacco factories, a timber company, a gas company, a department store, a woollen mills, 2 banks and an insurance company.

The duties of the physicians included one or more of the following:—The physical examination of applicants for employment, 14 establishments; periodical examination of employees, 7 establishments; hygienic supervision of working places, 10 establishments; lectures on first aid, 5 establishments; treatment of sickness and accident, 23 establishments. The duties of the nurses comprised one or more of the following:—The treatment of sickness and accident, 32 establishments; the keeping of statistical records of sickness and accident, 5 establishments; interviewing applicants for employment, 2 establishments; sanitary inspection, 2 establishments; recommendations re dentists, hospitals, etc., 1 establishment; permits to employees for relief of duties on account of sickness, 1 establishment; other duties, such as librarian, etc., 3 establishments.

Forty-two additional establishments employ persons qualified in first aid.

Eighteen establishments provide both an ambulance room and a dispensary. An "ambulance room" may be defined as a special room where immediate treatment of injuries may be obtained, and a "dispensary" a room where the usual remedies are kept for medical cases. These establishments include 3 biscuit or confectionery factories, a boot factory, a bank, 2 clothing factories, 4 department stores, a match factory, 2 motor-body building works, 3 railways, and a spinning mill.

Forty establishments provide an ambulance room. These include 3 biscuit or confectionery factories, 2 cement works, a chemical works, a manufacturing chemist, a department store, an electric supply company, 7 engineering works, 2 gas companies, a felt hat maker, a lead-works, a match factory, 2 meat works, 6 mining companies, a paper and pulp mill, a photographic supplies factory, a printing works, a railway, 2 rubber factories, 2 smelting and refining works, a timber company, and 2 tobacco factories.

The following five establishments provide a dispensary:—A manufacturing chemist, an insurance company, a printing works, a soap and glycerine factory, and a timber and joinery works.

Two department stores and a railway provide both a house ward and a rest room. By "house ward" is meant a special room in which one or more beds are provided for the use of employees in cases of sickness, and by "rest room" a room containing simply arm-chairs, with perhaps a sofa or lounge.

Fifty-three other establishments provide rest rooms.

Six companies—a boot factory, a cement company, 2 department stores, a smelting and refining works, and a timber company—arrange for the care of their employees during convalescence from illness.

§ 5. Education in Industrial Hygiene.

1. *General*.—The importance of industrial hygiene in the field of preventive medicine has not yet received recognition in the medical schools of Australia. The subject is practically ignored in the ordinary curricula, and facilities are not available for post-graduate work.

2. *New South Wales*.—The Department of Sanitation and Hygiene, Technical Education Branch, Department of Education, New South Wales, offers courses of training in Industrial Hygiene to meet the requirements of factory inspectors, welfare workers, or supervisors and others engaged in cognate work. The classes are also available to students who desire to study any of the special subjects dealt with.

The following course can be completed within one year by those who wish to qualify as "Factory Inspector":—Practical Sanitation: Sanitary Law: Industrial Hygiene (First Term); Safety First (second term): Machine Fencing (third term): Construction and Drawing for Sanitary Inspectors, or 1st Year Building Construction and Drawing.

The subjects dealt with under the heading Industrial Hygiene are as follow:—The history and rise of industrial hygiene; its scope; conditions of health and work: Effect of industrial revolution on distribution, increase, and health of population: Factory history; types of modern factories; sites; ventilation; recent research on harmful effects of stagnant air; high temperature and humidity; perfilation—natural and mechanical: Industrial physiology—the human machine; industrial activity and fatigue in relation to health; rhythm in industry; overtime; overwork; output; rest; day and night work; the workers; women in industry; child labour: Personal hygiene—standards for toilet; drinking and washing facilities; disposal of factory wastes; clothing; care of teeth and skin: Occupational diseases—dusty trades; silicosis; pneumoconiosis; tuberculosis problem: Causation and prevention of industrial accidents; the personal factor in accident causation; relation to age, sex, ignorance, over-crowding, poor illumination, physical unfitness, unsuitable clothing, defective machinery and structures, monotony of work: Organization for safety; safety committees; the duty of the employer and employee; safety devices for the worker: Nurses; welfare supervisors: Sociology of industry; baths; restaurants; recreational activities; community and home conditions; reclaiming the cripples of industry: Review of occupational legislation; maternal mortality; infant mortality; organization of health and community centres; health propaganda: First aid and ambulance work (one term): Safety First and machine fencing (one term).

The course of instruction on Safety First is as follows:—

I. *General*.—Meaning and object. Origin. Grades of accidents: Statistics and work done in U.S.A. and England: Cause of accidents; carelessness, ignorance, noise, unsuitable clothing, unsuitable light, want of mechanical guards, temperament, fatigue: Responsibility for an accident generally complex: Prevention of accidents; education: Accidents in homes: Cost of an accident to employer and country: Factory and traffic inspectors: Workmen's Compensation Acts: Objections raised to Safety First.

II. *Travelling*.—Pedestrian: Vehicular: Rules of the road; turns, limited view ahead, pay attention to signals and signs, look where going, be vigilant at all times: Horse vehicles; harness and gear in good order, securing horse when left, brakes, locking wheels: Trams; getting on and off while in motion or on wrong side, crossing legs, luggage in passage way: Railways; doors insecurely fastened or left open, luggage badly piled: Motor-cars and bicycles; speed limit, ease up at crossings, railway gates: Water; learn to swim and rescue from drowning, nets under gangways, beware of open hatches, sufficient life belts on boat and learn how to adjust them: Lifts; doors, locks, signals, non-slip at entrance, side protection.

III. *Handling and Transport*.—Lifting weights by hand: Cranes; factor of safety, jib, overhead, warning of danger: Tackle; ropes, sockets, hooks, pulleys: Roads; grades, curves, culverts, bridges; Stacking goods; elbow room: Packing on vehicles and making them secure; overloading.

IV. *Construction*.—Correct use of tools: Ladders: Scaffoldings: Design: Stairs: Wrecking.

V. *Illumination*.—The eye: Kinds of Light; natural and artificial (fixed and portable), infra red, ultra violet: Glasses; glare; reflected light: Quantity of light; candle power, foot candle: Distribution of light; direction of light, diffusion, shades, blinds.

VI. *Fires*.—Bush, buildings, ships, mines, various (sawdust, coal-heaps, oil-tanks): Causes of; smoking, live matches, sparks from engines, ignition of escape of gas or some inflammable substance, short circuiting of electric wires, stacking rubbish against buildings: Fire alarms: Fire escapes; fire doors, fire-proof buildings: Means of extinguishing fires; water, earth, foamite, fire extinguishers, sprinklers.

3. *United States of America*.—All the medical schools in the United States of America which have courses in hygiene and public health give 8 to 10 lectures dealing with industrial hygiene and the more dangerous occupations. In 1918, Harvard University, the first institution in the world to do so, established a course of instruction and research leading to degrees in industrial hygiene. The courses leading to the Certificate of Public Health in Industrial Hygiene include:—Applied physiology of industry; methods of air-analysis; industrial toxicology; vital statistics; industrial sanitation; preventive medicine and hygiene; industrial health administration; employment management; workmen's compensation and the legal aspects of industrial disease; nutrition; industrial surgery and medicine; orthopaedic surgery. For the degree of Doctor of Public Health in Industrial Hygiene a second year must be devoted to an investigation into some phase of industrial health. An Occupational Disease Clinic has been established at the Massachusetts General Hospital, and is available to the students of industrial medicine.

4. *Europe*.—(i) *Germany*. In Europe industrial museums of safety have been established in 22 cities. The Charlottenburg Museum (Berlin) is a typical example. Safety appliances for machinery, and appliances for the removal of dusts and injurious gases are shown in practical operation. The latest methods for diminishing the risks to health in the more dangerous occupations are illustrated by models and descriptive tests. The latest and best types of respirators, wire masks, goggles, first-aid kits, rescue appliances, etc., are on view. Special lectures and demonstrations are given on Sundays or by request at any convenient time to those interested.

(ii) *Italy*. In 1910 an Occupational Disease Clinic was established in Milan for the following purposes:—To study scientifically the causes of occupational diseases and to spread its clinical knowledge among physicians; to gather in the clinic all workmen apparently or decidedly affected by occupational diseases, whether in incipient or advanced stage, for the purpose of diagnostical and therapeutical experiments, and to examine systematically the health conditions of workmen engaged in industries of all kinds, and especially those working in unhygienic occupations.

(iii) *The European Universities*. Several of the European Universities have established laboratories for the development of experimental hygiene, and certain of the more important cities offer courses for industrial physicians and factory inspectors.

5. *The Need for Development in Australia*.—Australia might with advantage follow the examples set by the countries referred to, and introduce courses of study in the subject of industrial hygiene, not only for the medical student, but for the graduate in medicine. This could be done as part of a comprehensive system of public health training at a School of Public Health attached to each of the existing medical schools.

CHAPTER XIII.—LABOUR, WAGES, AND PRICES.

A. PRICES.

§ 1. Wholesale Prices.

1. *General.*—The results of an investigation into wholesale prices in Melbourne from 1871 to the end of September, 1912, were given in some detail in Report No. 1 of the Labour and Industrial Branch, while summarized results for later years are included in subsequent Reports.

The index-numbers up to the year 1911 are based on the prices of eighty commodities, but since that year the number has been increased to ninety-two.* The methods followed for the computation of the wholesale price index-numbers are similar to those adopted in regard to retail prices. The commodities included, the units of measurement for which the prices are taken, and the mass-units indicating the relative extent to which each commodity is used or consumed, are shown in a tabular statement in Labour Report No. 13 (page 62).

2. *Index-Numbers.*—Index-numbers have been computed for each group of commodities, as well as for all groups together. The index-numbers for the several groups, and for all groups together, are shown in the following table, and in each case were computed with the prices in the year 1911 as base. They show, for each of the years specified, the expenditure necessary, if distributed in purchasing the relative quantities (indicated by the mass-units) of the several commodities concerned, to purchase what would have cost £1,000 in 1911. Thus, from the last column it will be seen that the cost of the relative quantities of the various commodities was 1,229 in 1871, and 974 in 1901, as compared with 1,000 in 1911, 1,903 in 1921, and 1,885 in 1924. In other words, prices were lower in 1911 than in either 1871, 1921 or 1924, and the purchasing-power of money in 1911 was, accordingly, greater. Again, prices were lower in 1901 than in 1911, and the purchasing-power of money in the former year was, therefore, greater.

INDEX-NUMBERS.—WHOLESALE PRICES, MELBOURNE, 1861 TO 1924.

Year.	I. Metals. and Coal.	II. Jute, Leather, etc.	III. Agricultural Produce, etc.	IV. Dairy Produce.	V. Gro- ceries.	VI. Meat.	VII. Building Mate- rials.	VIII. Chem- icals.	All Com- modities together.
1861	1,438	1,881	1,583	1,008	1,963	..	1,070	2,030	1,538
1871	1,096	1,257	1,236	864	1,586	..	1,044	1,409	1,229
1881	1,178	1,115	1,012	935	1,421	..	1,091	1,587	1,121
1891	895	847	1,024	995	1,032	888	780	1,194	945
1901	1,061	774	928	1,029	1,048	1,345	841	917	974
1902	1,007	756	1,193	1,215	945	1,447	837	881	1,051
1903	923	834	1,209	1,059	936	1,443	875	921	1,049
1904	821	885	754	876	916	1,427	845	875	890
1905	772	850	894	980	942	1,209	801	859	910
1906	882	978	916	972	923	1,110	896	864	948
1907	1,037	1,017	973	1,020	948	1,294	968	961	1,021
1908	1,033	901	1,312	1,198	968	1,335	935	891	1,115
1909	1,014	907	1,000	1,119	978	1,088	911	815	993
1910	1,004	1,052	969	1,100	999	1,008	996	898	1,003
1911	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
1912	1,021	891	1,370	1,206	1,052	1,357	1,057	978	1,170
1913	1,046	1,070	1,087	1,054	1,024	1,252	1,128	995	1,088
1914	1,099	1,032	1,207	1,137	1,021	1,507	1,081	1,253	1,149
1915	1,284	1,017	2,102	1,133	1,325	2,435	1,275	1,528	1,604
1916	1,695	1,423	2,162	1,530	1,325	2,515	1,491	1,760	1,504
1917	2,129	2,008	2,108	1,485	1,345	2,403	1,884	2,171	1,662
1918	2,416	2,360	1,444	1,423	1,422	2,385	2,686	3,225	1,934
1919	2,125	2,363	1,985	1,651	1,516	2,348	2,851	2,898	2,055
1920	2,298	2,624	2,439	2,209	1,918	3,279	3,226	2,825	2,480
1921	2,173	1,362	1,767	2,000	1,976	2,158	2,733	2,303	1,903
1922	1,942	1,681	1,628	1,648	1,869	1,787	2,005	1,965	1,758
1923	1,826	2,148	1,778	1,837	1,746	2,579	2,025	1,973	1,944
1924	1,835	2,418	1,647	1,655	1,721	2,223	1,815	1,806	1,885

NOTE.—The figures given in this table are comparable in the vertical columns, but are not directly comparable horizontally. The index-numbers are reversible.

* In the computation of the index-numbers for years prior to 1911, the aggregate expenditure on 80 commodities in 1911 is taken as base (= 1,000), while for later years the aggregate expenditure on 92 commodities is taken.

3. Fluctuations, July, 1914, to May, 1925.—Since the outbreak of war, prices of many commodities have increased considerably. This is shown in the following table in which the index-numbers are given for each group for the months of July, 1921 to 1924, and May, 1925, taking July, 1914, the last month before the outbreak of war, as base (=1,000) for each group :—

INDEX-NUMBERS.—WHOLESALE PRICES, MELBOURNE, JULY, 1914, to 1924, AND MAY, 1925.

Particulars.	I. Metals. and Coal.	II. Jute. Leather, etc.	III. Agri- cultural Produce, etc.	IV. Dairy Produce.	V. Gro- ceries.	VI. Meat.	VII. Building Mate- rials.	VIII. Chem- icals.	All Groups.
July, 1914 ..	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
" 1921 ..	1,945	1,107	1,579	1,655	1,881	1,191	2,377	2,198	1,589
" 1922 ..	1,764	1,555	1,532	1,564	1,810	1,185	1,681	1,991	1,569
" 1923 ..	1,668	1,876	1,691	1,668	1,698	2,229	1,780	1,923	1,799
" 1924 ..	1,666	2,119	1,525	1,431	1,677	1,281	1,666	1,743	1,626
May, 1925 ..	1,661	1,802	1,589	1,430	1,665	1,335	1,561	1,728	1,592

§ 2. Retail Prices and House Rents.

1. Introduction.—(i) *General.* In Labour Report No. 1, issued in December, 1912, the results of certain investigations into the subjects of Prices, Price-Indexes and Cost of Living in past years were published, and some account was given of the methods employed for the collection of the data and of the technique adopted in the computation of the results. A detailed examination of the theory upon which the calculation of the index-numbers is based was given, but being necessarily too technical for the ordinary reader, was relegated to Appendixes. In Labour Reports Nos. 2, and 5 to 15, results of further investigations were included, and in Labour Bulletins Nos. 1 to 18, and in Quarterly summaries of Statistics, Nos. 70 to 98, information was incorporated regarding variations in retail and wholesale prices, house rent, and purchasing-power of money up to the end of 1924.

(ii) *Computation of Index-Numbers.* The method adopted for the computation of the index-numbers is what is termed the "aggregate expenditure" method. Thereunder the average price of each commodity included is ascertained, and numbers (called "mass-units") representing the *relative* extent to which each commodity was on the average used or consumed are also computed. The price in any year of each commodity multiplied by its corresponding "mass-unit" represents, therefore, the relative total expenditure on that commodity in that year *on the basis of the adopted regimen*. It follows, therefore, that by taking for any year the sum of the price of each commodity multiplied by its corresponding "mass-unit," a figure is obtained which represents the relative aggregate or total expenditure of the community in that year on all the commodities, etc., included. By computing these aggregate expenditures for a series of years and taking the expenditure in any selected year as "base," that is, making the expenditure in that year equal to 1,000 units, the relative expenditure in any other year, or what may be termed the "index-numbers," are readily ascertained. Numerical examples of the technique and methods adopted for the computation of index-numbers were given in Report No. 2 (pp. 44 and 45), and in Report No. 9 Appendixes I. to IV., pp. 174 to 229.

2. *Scope of Investigation.*—As noted in Report No. 1, distinction must be drawn between (a) Variations in the *purchasing-power* of money, and (b) Variations in the *standard of living*, and in Report No. 2 attention was directed to the factors which must be taken into consideration in dealing with these matters in order to arrive at a satisfactory aggregate expenditure. The various Reports deal with the list of commodities selected and the reasons for their adoption, while § 4 of this Chapter deals with the extension of the inquiry to cover all ordinary household expenditure.

3. Variations in Index-Numbers for Retail Prices and House Rents, Capital Cities, 1901 to 1924.—(i) *General.* In Labour Reports and Bulletins, and in recent issues of the Quarterly Summaries of Statistics, index-numbers were given for each of the four groups and for all groups combined for each capital city since 1901, the expenditure in 1911 being taken in each case as base (=1,000). In this sub-section summarized results only

are given, firstly, for food and groceries; secondly, for house rent; and thirdly, for the groups combined—the weighted average expenditure for all capital cities in 1911 being taken in each case as base (=1,000). The index-numbers in each table are fully comparable with one another since they show not only the variations from year to year in each capital, but also the relative cost as between the cities.

(ii) *Food and Groceries.* The index-numbers thus computed for the three groups comprising groceries and food are shown in the following table:—

RETAIL PRICE INDEX-NUMBERS, FOOD AND GROCERIES.—CAPITAL CITIES, 1901 TO 1924.

City.	1901.	1911.	1914.	1916.	1917.	1918.	1919.	1920.	1921.	1922.	1923.	1924.
Sydney ..	917	989	1,156	1,520	1,540	1,549	1,783	2,148	1,898	1,703	1,820	1,732
Melbourne ..	965	935	1,091	1,462	1,412	1,466	1,620	2,056	1,901	1,644	1,802	1,684
Brisbane ..	965	1,018	1,078	1,426	1,406	1,495	1,762	2,052	1,812	1,608	1,693	1,690
Adelaide ..	1,028	1,020	1,215	1,532	1,445	1,554	1,719	2,132	1,906	1,723	1,823	1,791
Perth ..	1,184	1,346	1,302	1,542	1,505	1,486	1,772	2,050	1,995	1,776	1,828	1,891
Hobart ..	1,011	1,058	1,212	1,523	1,544	1,635	1,748	2,162	2,025	1,794	1,863	1,840
Weighted Average(a) ..	972	1,000	1,144	1,495	1,472	1,514	1,716	2,101	1,902	1,684	1,805	1,732

(a) For all capital cities.

The figures quoted are directly comparable in every respect; thus, the same quantity of food and groceries, which cost £1,000 in the capital cities considered as a whole in 1911, would have cost £917 in Sydney in 1901, £1,346 in Perth in 1911, or £1,684 in Melbourne in 1924.

In 1924 decreases were experienced in all the capitals with the exception of Perth, which showed an increase of 3.4 per cent. from the previous year. Comparing the results for 1924 with those for 1911, the extent by which prices increased varied from 80.1 per cent. in Melbourne to 40.5 per cent. in Perth. Prices, however, were abnormally high in Perth in 1911.

(iii) *Housing.* The following table gives index-numbers computed for the weighted average house rent in each of the capital cities from 1901 to 1924, taking the average rent for the six capitals in 1911 as the base (=1,000). The average rent has been obtained for each city separately by multiplying the average predominant rent for each class of house (i.e., houses having less than 4 rooms, 4 rooms, 5 rooms, 6 rooms, 7 rooms, and over 7 rooms) by a number ("weight") representing the relative number of houses of that class in the particular city. The sum of the products thus obtained divided by the sum of the weights, gives the weighted average for all houses. The number of houses in each class for each city was obtained from the results of the 1911 census, and the index-numbers are based on the weighted average rents for all houses, and do not refer to any particular class of house. The actual predominant rents for each class were given in appendixes to Labour Reports Nos. 1, 2, and 5 to 14, and an examination of these figures shows that for some classes of houses the increase has been greater, and in some less, than the general increase indicated in the following table.

INDEX-NUMBERS.—HOUSING, CAPITAL CITIES, 1901 TO 1924.

City.	1901.	1911.	1914.	1916.	1917.	1918.	1919.	1920.	1921.	1922.	1923.	1924.
Sydney ..	858	1,090	1,270	1,212	1,215	1,252	1,289	1,415	1,474	1,535	1,617	1,687
Melbourne ..	733	970	1,126	1,089	1,124	1,180	1,283	1,405	1,502	1,597	1,672	1,729
Brisbane ..	488	767	882	847	859	905	983	1,061	1,079	1,206	1,247	1,242
Adelaide ..	629	1,112	1,040	930	959	1,022	1,108	1,216	1,289	1,360	1,450	1,551
Perth ..	801	810	914	869	874	885	916	998	1,055	1,092	1,124	1,134
Hobart ..	667	805	914	928	951	956	1,134	1,373	1,440	1,445	1,602	1,665
Weighted Average(a) ..	751	1,000	1,135	1,081	1,098	1,143	1,215	1,333	1,404	1,480	1,551	1,609

(a) For all capital cities.

NOTE.—The above figures are directly comparable in every respect.

A striking feature in the rent index-numbers is the decline in the years 1915 to 1917. This fall was probably, in some measure, due to the circumstance that wives and other dependents of soldiers shared houses or apartments, thus reducing the demand for accommodation. Government regulations forbidding increase in rents of houses tenanted by soldiers' dependents also had a restraining influence on any tendency towards a rise. In 1918 rents were again at the 1914 level, but in the years 1920 to 1924 fairly substantial increases occurred.

(iv) *Food, Groceries, and Housing combined.* The weighted averages for all groups are of importance, as indicating the general results of this investigation so far as the purchasing-power of money is concerned. The following table shows the index-numbers for groceries, food, and house rent for each capital city, the weighted average cost for the six capitals in 1911 being taken as base (=1,000):—

**RETAIL PRICE INDEX-NUMBERS(a)—FOOD, GROCERIES, AND HOUSING.—
CAPITAL CITIES, 1901 TO 1924.**

City.	1901.	1911.	1914.	1916.	1917.	1918.	1919.	1920.	1921.	1922.	1923.	1924.
Sydney ..	893	1,031	1,206	1,394	1,406	1,427	1,580	1,847	1,724	1,634	1,737	1,714
Melbourne ..	870	950	1,105	1,309	1,294	1,349	1,481	1,788	1,737	1,625	1,749	1,703
Brisbane ..	769	915	997	1,188	1,181	1,252	1,442	1,645	1,511	1,442	1,510	1,506
Adelaide ..	864	1,058	1,143	1,285	1,245	1,335	1,468	1,756	1,653	1,574	1,670	1,693
Perth ..	1,027	1,126	1,143	1,266	1,246	1,239	1,420	1,617	1,609	1,495	1,538	1,580
Hobart ..	869	954	1,090	1,278	1,301	1,356	1,496	1,837	1,785	1,651	1,756	1,773
Weighted Average(b) ..	880	1,000	1,140	1,324	1,318	1,362	1,510	1,785	1,697	1,600	1,700	1,682

(a) As the price index-number increases, the purchasing-power of money diminishes.

(b) For all capital cities.

NOTE.—The above figures are directly comparable in every respect.

The combination of housing with prices of food and groceries has had the effect of considerably modifying the index of prices, or, in other words, the purchasing-power of money, as compared with the similar index based on food and groceries only. In 1918, 1919, and 1920 there were increases in prices of food and groceries and housing, the combined results for 1920 being an increase of 18.2 per cent. over 1919, 56.6 per cent. over 1914, and 78.5 per cent. over 1911. The increase in the index-number between 1920 and 1914 varied between the capital cities from 41 per cent. in Perth to 69 per cent. in Hobart, while between 1920 and 1911 it varied between 44 per cent. in Perth and 93 per cent. in Hobart. The decrease in cost in 1921 was very slight in Perth compared with the decrease in the remaining cities. In 1922 there was a further decline in the combined cost of food, groceries, and housing in all the cities, the weighted average index-number being 1,600 as compared with 1,697 in 1921. The index-number for 1923 shows a rise of 6.3 per cent. on that for 1922, both food and groceries and housing contributing to the increase, while that for 1924 shows a decrease of 1.1 per cent. from 1923, food and groceries having decreased 4 per cent., while housing increased 3.7 per cent.

4. *Retail Price Index-numbers in Terms of Currency.*—The tables in sub-section 3 give the relative cost in the six capital cities of food, groceries, and housing from 1901 to 1924 in the form of index-numbers. The figures have been converted into a monetary basis in the next table, and show the sums which would have to be paid in each city and in each year in order to purchase such relative quantities (indicated by the mass-units) of the several commodities, and to pay such sums for housing as would in the aggregate cost £1, according to the weighted average prices and rents in the six capitals in 1911.

RETAIL PRICES.—AMOUNTS NECESSARY ON THE AVERAGE IN EACH YEAR FROM 1901 TO 1925 (1st QUARTER) TO PURCHASE IN EACH CAPITAL CITY WHAT WOULD COST ON THE AVERAGE £1 in 1911 IN THE AUSTRALIAN CAPITALS REGARDED AS A WHOLE.

Year.	Sydney.	Melb'ne.	Brisbane.	Adelaide.	Perth.	Hobart.	Weighted Average of 6 Capital Cities.
FOOD AND GROCERIES (46 COMMODITIES).							
1901	s. d. 18 4	s. d. 19 4	s. d. 19 4	s. d. 20 7	s. d. 23 8	s. d. 20 3	s. d. 19 4
1907	18 9	18 6	18 11	19 0	23 11	20 2	19 1
1911	19 9	18 8	20 4	20 5	26 11	21 2	20 0
1919	35 8	32 5	35 3	34 5	35 5	35 0	34 4
1920	43 0	41 1	41 1	42 8	41 0	43 3	42 0
1921	38 0	38 0	36 3	38 1	40 0	40 6	38 0
1922	34 1	32 11	32 2	34 6	35 6	35 11	33 8
1923	36 5	36 1	33 10	36 6	36 7	37 3	36 1
1924	34 8	33 8	33 10	35 10	37 10	37 0	34 8
1924 { 1st Quarter ..	35 8	34 7	35 2	36 11	37 6	37 11	35 7
2nd " ..	34 8	33 11	33 7	36 6	37 10	37 3	34 10
1924 { 3rd " ..	33 11	33 3	33 5	35 3	38 1	36 10	34 2
4th " ..	34 4	33 1	33 0	34 8	27 11	36 0	34 1
1925 1st	34 6	33 10	33 4	36 3	39 4	35 7	34 9

HOUSING ACCOMMODATION (WEIGHTED AVERAGE—ALL HOUSES).

1901	17 3	14 8	9 9	12 7	16 0	13 4	15 1
1907	18 4	16 1	11 6	16 3	13 8	14 2	16 4
1911	21 10	19 5	15 4	22 3	16 3	16 1	20 0
1919	25 9	25 8	19 8	22 2	18 4	22 8	24 4
1920	28 4	28 1	21 3	24 4	19 11	27 5	26 8
1921	29 6	30 0	21 7	25 9	21 0	28 10	28 1
1922	30 8	31 11	24 1	27 2	21 10	28 11	29 7
1923	32 4	33 5	24 11	29 0	22 6	32 1	31 0
1924	33 9	34 7	24 10	31 0	22 8	33 4	32 2
1924 { 1st Quarter ..	33 1	34 1	24 10	29 4	22 7	33 3	31 7
2nd " ..	33 9	34 6	24 10	31 6	22 7	33 3	32 2
1924 { 3rd " ..	34 0	34 9	24 10	31 7	22 7	33 2	32 5
4th " ..	34 3	35 0	24 10	31 8	23 0	33 6	32 7
1925 1st	34 6	34 11	25 0	31 2	23 0	34 3	32 8

FOOD, GROCERIES, AND HOUSING COMBINED.

1901	17 10	17 5	15 5	17 3	20 6	17 5	17 7
1907	18 6	17 6	15 11	17 11	19 9	17 9	17 11
1911	20 7	19 0	18 4	21 2	22 6	19 1	20 0
1919	31 7	29 7	28 10	29 4	28 5	29 11	30 2
1920	36 11	35 9	32 11	35 1	32 4	36 9	35 8
1921	34 6	34 10	30 3	33 1	32 2	35 8	33 11
1922	32 8	32 6	28 10	31 6	29 11	33 0	32 0
1923	34 9	35 0	30 2	33 5	30 9	35 1	34 0
1924	34 3	34 1	30 1	33 10	31 7	35 6	33 8
1924 { 1st Quarter ..	34 7	34 4	30 11	33 10	31 4	36 0	33 11
2nd " ..	34 4	34 2	30 0	34 6	21 7	35 7	33 9
1924 { 3rd " ..	33 11	33 11	29 11	33 9	31 8	35 4	33 5
4th " ..	34 3	33 10	29 8	33 6	31 10	35 0	33 6
1925 1st	34 6	34 4	29 11	34 2	32 7	35 1	33 11

5. **Variations in Index-numbers, Retail Prices and Housing, Thirty Australian Towns, 1924.**—The index-numbers given in the preceding sub-sections show changes in the cost of food, groceries, and housing separately for each capital city during the years 1901 to 1924. The figures given in the next table show the relative cost of food and groceries, and of housing in 1924 in the thirty towns for which particulars are now collected. The weighted aggregate expenditure for the six capitals for the year 1911 has been taken as base and made equal to 1,000, hence the columns are comparable both horizontally and vertically. The index-numbers in the last column are the same as in previous tables where the period and town are comparable.

RELATIVE INDEX-NUMBERS.—FOOD, GROCERIES AND HOUSING, THIRTY TOWNS, 1924.

(NOTE.—Weighted Average Cost all Groups, Capital Cities, 1911, taken as base = 1,000.)

TOWN.	Food and Groceries.	HOUSING.				FOOD, GROCERIES, AND RENT OF—			
		Four-roomed Houses.	Five-roomed Houses.	Six-roomed Houses.	All Houses.	Four-roomed Houses.	Five-roomed Houses.	Six-roomed Houses.	All Houses.
NEW SOUTH WALES—									
Sydney	1,020	532	655	786	694	1,552	1,675	1,866	1,714
Newcastle	1,030	441	590	741	578	1,471	1,620	1,771	1,608
Broken Hill* .. .	1,151	312	373	446	331	1,463	1,524	1,597	1,482
Goulburn	1,041	505	644	772	684	1,546	1,685	1,813	1,725
Bathurst	970	313	418	514	442	1,283	1,388	1,484	1,412
Weighted Average ..	1,024	517	640	771	672	1,541	1,664	1,735	1,696
VICTORIA—									
Melbourne	992	491	632	815	711	1,483	1,624	1,807	1,703
Ballarat	1,004	284	400	490	455	1,288	1,404	1,494	1,459
Bendigo	1,018	307	390	511	428	1,325	1,408	1,529	1,446
Geelong	985	378	504	648	554	1,363	1,489	1,633	1,539
Warrnambool .. .	1,015	383	511	622	544	1,398	1,526	1,637	1,559
Weighted Average ..	994	471	608	782	682	1,465	1,602	1,776	1,676
QUEENSLAND—									
Brisbane	996	331	451	572	510	1,327	1,447	1,568	1,506
Toowoomba	943	293	397	499	484	1,236	1,340	1,442	1,427
Rockhampton .. .	989	238	303	387	379	1,227	1,292	1,376	1,368
Charters Towers ..	1,084	257	346	435	330	1,341	1,430	1,519	1,414
Warwick	957	338	411	481	479	1,295	1,368	1,438	1,436
Weighted Average ..	993	318	430	544	490	1,311	1,423	1,537	1,483
SOUTH AUSTRALIA—									
Adelaide	1,055	485	612	758	638	1,540	1,667	1,813	1,693
Kadina, etc. .. .	1,035	267	359	427	348	1,302	1,394	1,462	1,383
Port Pirie* .. .	1,072	332	413	474	395	1,404	1,485	1,546	1,467
Mt. Gambier .. .	997	232	313	403	321	1,229	1,310	1,400	1,318
Peterborough .. .	1,070	388	463	576	480	1,458	1,533	1,646	1,550
Weighted Average ..	1,054	466	589	728	611	1,520	1,643	1,782	1,665
WESTERN AUSTRALIA—									
Perth, etc. .. .	1,114	404	496	585	466	1,518	1,610	1,699	1,589
Kalgoorlie, etc. ..	1,250	329	394	461	323	1,579	1,644	1,711	1,573
Northam	1,129	409	523	671	409	1,538	1,652	1,800	1,538
Bunbury	1,143	367	460	603	371	1,510	1,603	1,746	1,514
Geraldton	1,169	440	520	658	406	1,609	1,689	1,827	1,575
Weighted Average ..	1,130	397	486	576	446	1,527	1,616	1,706	1,576
TASMANIA—									
Hobart	1,089	488	655	817	684	1,577	1,744	1,906	1,773
Launceston	1,081	387	553	699	584	1,468	1,634	1,780	1,665
Burnie	1,107	434	577	707	566	1,541	1,684	1,814	1,673
Devonport	1,098	443	557	679	582	1,541	1,655	1,777	1,680
Queenstown .. .	1,188	263	342	368	256	1,451	1,530	1,556	1,444
Weighted Average ..	1,092	447	607	757	631	1,539	1,699	1,849	1,723
Australia, Weighted Average, 30 Towns ..	1,024	466	592	734	634	1,490	1,616	1,758	1,658

* See remarks on page 43 of Labour Report, No. 13, with reference to house rents.

§ 3. Retail Price Index-Numbers, 200 Towns.

1. General.—To supplement the information collected each month for the 30 towns specified in the preceding paragraph, a special investigation was initiated in November, 1913, into retail price index-numbers in 70 additional towns. This investigation was repeated in November, 1914, and again in November, 1915, when the number of additional towns was increased to 120. In November, 1923, the number of additional towns was further increased to 170, and it is intended to institute inquiries in November in each year, thus making information available annually for 200 towns. The results

of the first investigation were published in Labour Bulletin No. 5 (Section IV., pages 26 to 33), where some description was given of the methods adopted in making the investigation and in computing the index-numbers. The results of the succeeding yearly investigations have appeared in the Labour Bulletins and Reports of this Bureau.

2. Detailed Results, 1922 to 1924.—The results of the investigation made in November, 1924, are set out in the following tables. The aggregate expenditure on food and groceries separately is shown in the form of index-numbers for each year in column A. In columns B and C the corresponding aggregate expenditure on food, groceries and rent of 4 rooms, and food, groceries, and rent of 5 rooms are shown for each year for each individual town. The index-number 1,597 represents the weighted average expenditure in 200 towns on food, groceries, and rent of 5-roomed houses; 1,472 represents the average weighted expenditure on food, groceries, and rent of 4-roomed houses in November, 1924. Similarly, in column A, the index-number 1,012 represents the relative weighted average expenditure on food and groceries only for November, 1924. The figures given in the table are comparable throughout. Thus, taking the average weighted expenditure for all 200 towns on food, groceries, and rent of 5-roomed houses as equal to 1,597, the expenditure on the same items in Melbourne is 1,600, while if 4-roomed houses were substituted for 5-roomed the expenditure in Melbourne would be represented by 1,455.

A change has been made in the basis on which the index-numbers in this table are computed. Previously, the weighted average expenditure on food, groceries, and rent of 5-roomed houses for the 150 towns in each year was taken as base. In the tables on the following pages the same basis is taken as in the case of the tables referring to 30 towns and 6 capital cities given in the preceding section, i.e., the weighted average expenditure on food, groceries, and housing accommodation in the 6 capital cities in 1911 is made equal to 1,000.

INDEX-NUMBERS.—COST OF FOOD, GROCERIES AND HOUSING IN 150 TOWNS FOR NOVEMBER, 1922, AND 200 TOWNS IN 1923 AND 1924, COMPARED WITH THE WEIGHTED AVERAGE COST OF FOOD, GROCERIES, AND RENT FOR ALL HOUSES IN THE SIX CAPITAL CITIES IN 1911 AS BASE (=1,000).

State and Town.	1922. November.			1923. November.			1924. November.		
	Food and Groceries only.	Food, Groceries and Rent of 4-Roomed Houses.	Food, Groceries and Rent of 5-Roomed Houses.	Food and Groceries only.	Food, Groceries and Rent of 4-Roomed Houses.	Food, Groceries and Rent of 5-Roomed Houses.	Food and Groceries only.	Food, Groceries and Rent of 4-Roomed Houses.	Food, Groceries and Rent of 5-Roomed Houses.
	A	B	C	A	B	C	A	B	C
NEW SOUTH WALES—									
Sydney	1,034	1,553	1,641	1,087	1,608	1,705	1,022	1,559	1,690
Newcastle	1,008	1,419	1,574	1,120	1,531	1,676	1,006	1,447	1,599
Broken Hill	1,050	1,331	1,402	1,227	1,510	1,587	1,145	1,467	1,525
Goulburn	986	1,409	1,527	1,095	1,570	1,661	1,020	1,521	1,694
Bathurst	940	1,187	1,309	1,045	1,325	1,414	941	1,264	1,376
Albury	986	1,519	1,594	1,060	1,636	1,754	990	1,648	1,785
Armidale	974	1,382	1,404	1,073	1,424	1,536	986	1,371	1,469
Ballina .. .. .	..	..	..	1,189	1,511	1,564	1,052	1,546	1,678
Bega	983	1,259	1,358	1,132	1,408	1,530	1,029	1,322	1,437
Berry .. .. .	..	..	..	1,117	1,413	1,512	1,068	1,331	1,496
Blackheath .. .. .	..	..	..	1,199	1,633	1,725	1,130	1,623	1,738
Bourke	1,055	1,232	1,285	1,228	1,426	1,505	1,055	1,266	1,292
Bowral	1,061	1,495	1,594	1,141	1,701	1,760	1,060	1,530	1,672
Casino	1,011	1,373	1,439	1,133	1,541	1,643	1,063	1,490	1,611
Cessnock .. .. .	..	..	..	1,111	1,576	1,659	1,014	1,529	1,683
Cobar	1,043	1,141	1,174	1,152	1,251	1,284	1,073	1,162	1,208
Cooma	1,006	1,292	1,380	1,220	1,611	1,709	1,083	1,425	1,537
Coonamble	1,045	1,352	1,435	1,142	1,405	1,475	1,077	1,406	1,472
Cootamundra	921	1,337	1,440	1,098	1,558	1,690	976	1,447	1,549
Corrimal	1,013	1,309	1,381	1,106	1,435	1,527	975	1,304	1,370
Cowra	974	1,372	1,484	1,074	1,505	1,599	1,017	1,438	1,511
Cronulla .. .. .	..	..	..	1,155	1,748	1,879	1,071	1,713	1,845
Cudgong .. .. .	..	..	..	1,167	1,364	1,463	1,053	1,289	1,355
Deniliquin	1,008	1,309	1,378	1,087	1,405	1,474	1,009	1,336	1,429
Dubbo	1,018	1,445	1,542	1,204	1,657	1,791	1,065	1,537	1,641
Forbes	1,014	1,398	1,569	1,105	1,559	1,757	1,000	1,491	1,651

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NEW SOUTH WALES— <i>continued</i> —	A	B	C	A	B	C	A	B	C
Gilgandra	1,136	1,426	1,505	1,016	1,268	1,321
Glen Innes	957	1,266	1,400	1,015	1,326	1,423	925	1,254	1,401
Grafton	1,006	1,359	1,478	1,149	1,544	1,643	1,035	1,324	1,430
Grenfell	977	1,444	1,569	1,179	1,541	1,771	1,038	1,498	1,630
Griffiths .. .. .	..	..	..	1,214	1,872	2,004	1,006	1,796	1,862
Guilgong .. .. .	..	..	..	1,092	1,388	1,451	995	1,291	1,354
Gunnedah	990	1,296	1,358	1,039	1,434	1,566	962	1,333	1,439
Hay	1,004	1,280	1,405	..	..	..	1,085	1,392	1,531
Inverell	1,001	1,363	1,407	1,102	1,452	1,521	1,011	1,373	1,451
June	991	1,418	1,517	1,117	1,561	1,676	972	1,564	1,696
Katoomba	1,060	1,584	1,371	1,205	1,728	1,859	1,129	1,619	1,737
Kempsey	961	1,290	1,427	1,021	1,350	1,383	1,004	1,398	1,484
Kurri Kurri .. .. .	..	..	..	1,181	1,477	1,550	1,068	1,424	1,496
Leeton .. .. .	..	..	..	1,196	1,914	1,949	1,097	1,867	1,886
Lismore	1,047	1,402	1,563	1,162	1,517	1,678	1,049	1,404	1,566
Lithgow	1,018	1,355	1,472	1,166	1,547	1,655	1,023	1,422	1,502
Maitland	994	1,350	1,402	1,086	1,554	1,596	952	1,409	1,491
Moree	1,079	1,487	1,605	1,288	1,692	1,797	1,104	1,556	1,692
Moss Vale	999	1,394	1,559	1,112	1,622	1,704	1,034	1,516	1,670
Mudgee	995	1,414	1,504	1,115	1,515	1,611	982	1,398	1,485
Narrabri	992	1,292	1,395	1,109	1,427	1,563	960	1,309	1,436
Narrandera .. .. .	..	..	..	1,187	1,621	1,746	1,069	1,516	1,694
Nowra	1,052	1,578	1,657	1,164	1,559	1,717	1,036	1,481	1,595
Orange	955	1,307	1,410	1,032	1,432	1,535	992	1,447	1,565
Parkes	1,000	1,434	1,559	1,120	1,604	1,696	1,020	1,480	1,595
Penrith .. .. .	..	..	..	1,082	1,440	1,557	1,025	1,340	1,436
Port Kembla .. .. .	..	..	..	1,145	1,467	1,540	1,057	1,380	1,450
Portland .. .. .	..	..	..	1,106	1,402	1,494	1,042	1,423	1,535
Queanbeyan	1,014	1,376	1,458	1,172	1,577	1,676	1,057	1,551	1,704
Quirindi .. .. .	..	..	..	1,128	1,437	1,562	1,034	1,350	1,507
Richmond .. .. .	..	..	..	1,121	1,492	1,588	1,075	1,493	1,569
Scone .. .. .	..	..	..	1,028	1,462	1,587	965	1,335	1,491
Singleton .. .. .	..	..	..	1,117	1,479	1,548	988	1,353	1,442
Tamworth	921	1,339	1,497	1,065	1,427	1,582	947	1,380	1,465
Taree .. .. .	..	..	..	1,088	1,598	1,687	979	1,538	1,686
Temora	1,006	1,467	1,532	1,099	1,555	1,667	1,057	1,584	1,692
Tenterfield .. .. .	..	..	..	1,137	1,490	1,565	1,010	1,383	1,436
Tumut .. .. .	..	..	..	1,149	1,511	1,643	1,030	1,533	1,632
Ulmara .. .. .	..	..	..	1,163	1,571	1,623	1,075	1,470	1,602
Wagga Wagga	951	1,350	1,477	1,132	1,856	1,988	1,016	1,740	1,838
Walcha .. .. .	..	..	..	1,009	1,305	1,436	994	1,257	1,405
Wellington	944	1,226	1,313	1,129	1,414	1,506	1,018	1,308	1,421
Weston .. .. .	..	..	..	1,198	1,487	1,527	1,066	1,356	1,395
Windsor .. .. .	..	..	..	1,108	1,483	1,634	1,052	1,488	1,562
Wollongong	1,018	1,399	1,465	1,137	1,560	1,652	1,045	1,508	1,595
Wyalong	983	1,329	1,445	1,148	1,595	1,681	1,099	1,494	1,626
Yass	1,069	1,385	1,449	1,249	1,567	1,648	1,080	1,458	1,524
Young	950	1,306	1,408	1,014	1,412	1,511	942	1,376	1,475
Weighted Average for State	1,024	1,403	1,589	1,099	1,585	1,686	1,023	1,527	1,653
VICTORIA—									
Melbourne	967	1,431	1,570	1,062	1,547	1,689	963	1,455	1,600
Ballarat	976	1,217	1,320	1,080	1,356	1,463	987	1,268	1,384
Bendigo	977	1,284	1,381	1,075	1,375	1,473	988	1,293	1,373
Geelong	959	1,322	1,439	1,054	1,427	1,556	945	1,318	1,448
Warrnambool	932	1,273	1,431	1,067	1,448	1,578	987	1,370	1,497
Arauc	1,002	1,303	1,395	1,150	1,472	1,540	1,049	1,372	1,455
Bacchus Marsh .. .. .	..	..	..	1,081	1,489	1,640	961	1,389	1,520
Bairnsdale	1,009	1,371	1,494	1,166	1,528	1,692	1,052	1,414	1,578
Beechworth	996	1,223	1,275	1,114	1,364	1,433	1,040	1,303	1,369
Benalla	947	1,276	1,385	1,081	1,413	1,489	993	1,325	1,421
Camperdown	963	1,339	1,539	1,055	1,450	1,581	1,001	1,404	1,527
Casterton .. .. .	..	..	..	1,073	1,345	1,446	1,013	1,300	1,425
Castlemaine	997	1,280	1,375	1,069	1,358	1,454	1,056	1,389	1,505
Colac	973	1,500	1,582	1,135	1,675	1,793	1,042	1,574	1,667
Creswick	921	1,053	1,092	1,035	1,154	1,206	962	1,107	1,126
Daylesford	995	1,247	1,329	1,080	1,376	1,458	986	1,216	1,282
Dunolly	934	1,092	1,131	1,067	1,212	1,238	996	1,147	1,180
Echuca	973	1,235	1,327	1,069	1,364	1,464	1,026	1,355	1,470

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VICTORIA—continued.	A	B	C	A	B	C	A	B	C
Euroa ..	1,011	1,243	1,206	1,131	1,414	1,476	1,070	1,389	1,465
Hamilton ..	1,018	1,402	1,534	1,140	1,557	1,667	1,086	1,590	1,744
Healesville ..				1,147	1,588	1,700	1,016	1,430	1,542
Horsham ..	987	1,417	1,536	1,103	1,673	1,827	1,065	1,668	1,865
Kerang ..				1,126	1,652	1,784	1,061	1,620	1,752
Koroit ..				1,096	1,372	1,458	988	1,251	1,357
Korumburra ..	939	1,273	1,376	1,124	1,387	1,510	1,037	1,497	1,629
Kyneton ..	951	1,273	1,331	1,064	1,380	1,459	980	1,316	1,410
Lilydale ..				1,127	1,555	1,653	1,012	1,440	1,572
Maffra ..				1,146	1,738	1,870	1,019	1,622	1,732
Maldon ..	950	1,093	1,137	1,086	1,242	1,279	1,000	1,158	1,206
Maryborough ..	977	1,154	1,270	1,108	1,315	1,407	1,000	1,214	1,309
Mildura ..	1,102	1,757	1,829	1,163	1,769	1,920	1,084	1,693	1,805
Morwell ..				1,108	1,733	1,832	1,041	1,764	1,830
Nhill ..	1,066	1,348	1,409	1,149	1,518	1,639	1,124	1,550	1,699
Nrbost ..	1,020	1,415	1,547	1,104	1,433	1,499	1,047	1,442	1,573
Portland ..	1,023	1,346	1,467	1,097	1,412	1,525	1,067	1,357	1,498
Port Fairy ..				1,090	1,358	1,424	1,016	1,292	1,352
St. Arnaud ..	976	1,244	1,325	1,122	1,451	1,591	1,040	1,435	1,514
Salé ..	936	1,252	1,360	1,072	1,487	1,643	987	1,432	1,582
Seymour ..				1,090	1,370	1,462	1,062	1,400	1,490
Shepparton ..	1,010	1,454	1,569	1,092	1,487	1,566	1,007	1,476	1,590
Stawell ..	1,070	1,331	1,423	1,180	1,452	1,548	1,087	1,372	1,451
Swan Hill ..	982	1,574	1,739	1,086	1,612	1,777	1,052	1,710	1,809
Terang ..				1,105	1,447	1,552	1,041	1,449	1,567
Traralgon ..				1,067	1,426	1,518	1,024	1,386	1,485
Wangaratta ..	1,014	1,350	1,431	1,166	1,618	1,686	1,061	1,458	1,563
Warracknabeal ..	973	1,335	1,400	1,065	1,512	1,634	1,020	1,536	1,645
Warragul ..				1,099	1,595	1,735	969	1,429	1,561
Wonthaggi ..	1,000	1,439	1,527	1,204	1,674	1,761	1,049	1,474	1,566
Weighted Average for State	971	1,389	1,517	1,069	1,525	1,660	973	1,437	1,574
QUEENSLAND—									
Brisbane ..	942	1,275	1,385	1,039	1,376	1,487	970	1,303	1,423
Toowoomba ..	927	1,183	1,262	1,049	1,339	1,423	905	1,223	1,324
Rockhampton ..	946	1,194	1,239	1,085	1,329	1,375	972	1,211	1,278
Charters Towers ..	993	1,243	1,312	1,132	1,390	1,474	1,065	1,322	1,411
Warwick ..	919	1,175	1,230	1,023	1,296	1,404	931	1,291	1,352
AYR ..				1,195	1,611	1,732	1,125	1,546	1,691
Barcardine ..				1,237	1,582	1,681	1,116	1,477	1,609
Bowen ..				1,103	1,498	1,597	1,079	1,507	1,655
Bundaberg ..	940	1,192	1,278	959	1,211	1,293	947	1,232	1,327
Cairns ..	1,044	1,452	1,538	1,163	1,602	1,738	1,139	1,596	1,710
Charleville ..	1,072	1,466	1,624	1,145	1,573	1,671	1,077	1,537	1,702
Chillagoe ..	1,050	1,313	1,379	1,138	1,467	1,533	1,063	1,326	1,392
Cloncutry ..	1,115	1,488	1,585	1,174	1,510	1,653	1,178	1,540	1,636
Cooktown ..	1,126	1,233	1,270	*	*	*	1,072	1,173	1,221
Cunnamulla ..	1,047	1,363	1,441	1,155	1,484	1,550	1,074	1,403	1,468
Dalby ..				1,031	1,268	1,321	981	1,310	1,375
Gayndah ..				1,031	1,360	1,426	952	1,243	1,310
Gladstone ..				1,040	1,303	1,435	1,020	1,283	1,415
Goondiwindi ..	1,016	1,271	1,367	1,145	1,428	1,540	1,033	1,362	1,471
Gympie ..	998	1,251	1,336	1,054	1,305	1,405	990	1,286	1,352
Hughenden ..	1,092	1,586	1,750	1,194	1,638	1,770	1,101	1,588	1,682
Innisfail ..				1,309	1,814	1,923	1,211	1,649	1,803
Ipswich ..	951	1,241	1,326	1,063	1,406	1,458	963	1,246	1,331
Longreach ..	1,098	1,385	1,487	1,221	1,552	1,647	1,073	1,446	1,591
Mackay ..	962	1,327	1,436	1,066	1,448	1,571	987	1,407	1,511
Maryborough ..	962	1,231	1,363	998	1,251	1,353	953	1,233	1,351
Mount Morgan ..	965	1,183	1,222	1,127	1,357	1,484	1,023	1,300	1,346
Nambour ..				1,054	1,400	1,498	994	1,410	1,498
Roma ..	1,009	1,371	1,450	1,132	1,484	1,534	1,010	1,326	1,434
Stanthorpe ..				1,134	1,503	1,575	1,075	1,431	1,503
Townsville ..	1,079	1,493	1,632	1,149	1,603	1,731	1,085	1,569	1,719
Winton ..	1,090	1,551	1,715	1,235	1,735	1,834	1,108	1,656	1,722
Weighted Average for State	963	1,272	1,368	1,063	1,393	1,492	987	1,320	1,430

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SOUTH AUSTRALIA—	A	B	C	A	B	C	A	B	C
Adelaide	987	1,418	1,548	1,072	1,518	1,667	1,020	1,516	1,645
Kadina, etc.	990	1,245	1,351	1,059	1,334	1,435	1,014	1,281	1,373
Port Pirie	978	1,297	1,391	1,110	1,433	1,530	1,060	1,399	1,479
Mount Gambier	950	1,185	1,252	1,051	1,286	1,354	994	1,233	1,316
Peterborough	1,013	1,303	1,373	1,079	1,395	1,470	1,103	1,502	1,584
Freeling .. . . .	..	..	..	1,006	1,269	1,375	1,083	1,379	1,445
Gawler	955	1,294	1,389	1,014	1,326	1,400	1,016	1,398	1,457
Kapunda	947	1,184	1,260	1,041	1,304	1,403	1,004	1,215	1,327
Korunga .. . . .	..	..	..	1,110	1,505	1,571	1,053	1,448	1,514
Millicent .. . . .	..	..	..	1,099	1,428	1,520	966	1,427	1,440
Murray Bridge	947	1,348	1,416	1,079	1,524	1,623	1,023	1,474	1,582
Port Augusta	1,023	1,348	1,451	1,112	1,437	1,540	1,123	1,448	1,551
Quorn .. . . .	..	..	..	1,065	1,529	1,651	1,028	1,518	1,620
Victor Harbour	975	1,502	1,633	1,031	1,580	1,711	1,050	1,642	1,774
Renmark	1,059	1,652	1,783	1,166	1,640	1,759	1,116	1,613	1,749
Weighted Average for State	986	1,392	1,515	1,073	1,498	1,639	1,024	1,494	1,616
WESTERN AUSTRALIA—									
Perth and Fremantle	998	1,389	1,577	1,046	1,446	1,538	1,114	1,527	1,618
Kalgoorlie and Boulder	1,154	1,493	1,557	1,233	1,580	1,645	1,258	1,590	1,651
Northam	1,081	1,432	1,542	1,154	1,510	1,610	1,074	1,496	1,612
Bunbury	1,046	1,397	1,497	1,056	1,420	1,525	1,137	1,507	1,601
Geraldton	1,065	1,462	1,548	1,131	1,570	1,654	1,192	1,632	1,704
Albany	1,099	1,395	1,467	1,172	1,468	1,567	1,204	1,498	1,609
Beverley .. . . .	..	..	..	1,072	1,281	1,360	1,132	1,366	1,423
Bridgetown .. . . .	..	..	..	1,149	1,560	1,626	1,193	1,538	1,604
Broome	1,308	1,966	2,098	1,306	1,964	2,030	1,330	1,988	2,053
Carnarvon	1,237	1,730	1,779	1,249	1,743	1,841	1,184	1,710	1,776
Collie .. . . .	..	..	..	1,105	1,467	1,533	1,172	1,567	1,632
Greenbushes .. . . .	..	..	..	1,193	1,378	1,404	1,242	1,440	1,466
Katanning	1,009	1,388	1,549	1,000	1,404	1,467	1,077	1,459	1,577
Leonora and Gwalia	1,269	1,427	1,467	1,355	1,513	1,552	1,399	1,557	1,597
Meekatharra .. . . .	..	..	..	1,162	1,425	1,491	1,364	1,627	1,693
Narrogin .. . . .	..	..	..	1,136	1,636	1,794	1,154	1,628	1,812
Wagin .. . . .	..	..	..	1,104	1,338	1,453	1,185	1,491	1,537
York .. . . .	..	..	..	1,125	1,487	1,540	1,176	1,522	1,574
Weighted Average for State	1,045	1,416	1,506	1,078	1,466	1,555	1,138	1,536	1,624
TASMANIA—									
Hobart	1,013	1,416	1,592	1,114	1,574	1,762	1,051	1,579	1,724
Launceston	1,007	1,374	1,536	1,112	1,490	1,657	1,057	1,444	1,610
Burnie	1,028	1,454	1,586	1,176	1,583	1,746	1,042	1,485	1,621
Devonport	1,010	1,421	1,490	1,146	1,566	1,683	1,080	1,524	1,641
Queenstown	1,092	1,356	1,435	1,214	1,478	1,556	1,185	1,448	1,527
Beaconsfield	995	1,069	1,091	1,113	1,205	1,225	1,099	1,218	1,257
Campbelltown	979	1,129	1,183	1,052	1,260	1,308	1,045	1,259	1,333
Deloraine .. . . .	..	..	..	1,019	1,197	1,457	1,014	1,363	1,396
Franklin	1,024	1,257	1,327	1,082	1,314	1,351	1,061	1,298	1,325
New Norfolk .. . . .	..	..	..	1,043	1,372	1,465	1,032	1,361	1,460
Scottsdale	1,051	1,315	1,380	1,129	1,392	1,458	1,039	1,336	1,418
Ulverstone .. . . .	..	..	..	1,128	1,450	1,558	1,030	1,380	1,477
Zeehan	1,116	1,281	1,327	1,251	1,415	1,468	1,154	1,364	1,430
Weighted Average for State	1,020	1,375	1,519	1,120	1,526	1,689	1,059	1,509	1,647
Weighted Average for Australia	998	1,415	1,525	1,083	1,526	1,642	1,012	1,472	1,597

By deducting the index-number in column A from those in columns B and C, the relative aggregate expenditure on housing accommodation can be ascertained. Thus, for November, 1924, the index-number for food and groceries in Melbourne (column A) is 963. Subtracting this from 1,455 (column B) gives a difference of 492, which is the relative cost of house rent for houses of 4 rooms, and from 1,600 (column C) gives a difference of 637, which is the relative cost of house rent for houses of 5 rooms.

Similarly the relative cost of housing accommodation can be ascertained for each of the towns included.

A table showing the retail price index-numbers (food and groceries) for each of the thirty towns for various months since July, 1914, appeared in previous issues, but considerations of space preclude its repetition in the present issue. This table is, however, given in Labour Report No. 14, issued by this Bureau.

§ 4. Variations in the Cost of Food, Groceries, Rent, Clothing and Miscellaneous Expenditure.

1. *General.*—The index-numbers in §3 show the variations in the cost of food, groceries, and house rent. The expenditure on these items covers approximately 80 per cent. of the total expenditure of the ordinary household. The balance is expended on clothing, boots, fuel, light, and such miscellaneous items as renewals of furniture, furnishings, drapery, crockery, lodge dues, trade union dues, recreation, newspapers, etc. The Royal Commission on the Basic Wage recommended in its Report that a method should be adopted of ascertaining from time to time the rise and fall in the purchasing-power of money in its relation to the total household expenditure. The Government adopted the recommendation, and the duty of carrying out the necessary investigations was entrusted to the Bureau of Census and Statistics, which adopted the methods hereunder described.

2. *Methods Adopted.*—The Commission was concerned principally with the ascertainment of variations in the cost of the regimen described in the Indicator Lists published in its Report. It is clear, however, that restriction of the investigations of the Bureau of Census and Statistics in the way suggested by the Commission, would have limited their usefulness. It was decided, therefore, to apply to the extended investigation the method of index-numbers already used in the investigations into variations in the cost of food, groceries, and rent. The index-numbers may be used to determine accurately from time to time the rise and fall in the purchasing-power of money in relation to the reasonable standard of comfort for the typical family as outlined by the Commission, as well as for the determination of variations in any standard fixed by previous investigators, or which may be fixed in the future.

After careful investigation it was decided to adopt for food, groceries, and house rent the commodities, method, and weighting used by this Bureau. The commodities and quantities adopted for food and groceries conform very closely to those given in the Indicator Lists of the Commission. With regard to rent, the Commission adopted a certain type of five-roomed house as its standard for determining the amount allowed for housing. The investigations made by this Bureau were not confined to any particular type, but to the predominant house rent, and can with safety be used to show variations in the rent being paid for the type of house described by the Commission.

The investigations of this Bureau advisedly had been confined to food, groceries, and house rent,* and it was necessary, therefore, to make investigations into the cost of clothing and miscellaneous expenditure. With regard to clothing, the Basic Wage Commission collected a large amount of information as to prices and life of articles, and this has been utilized in computing the index-numbers given in the following tables. Forms were sent out to retailers on which the prices of the articles at November, 1920, were given. These prices, so far as the capital cities are concerned (being in general the prices quoted by the firms to whom the forms were sent), are the predominant prices, i.e., the price of the grade of the articles which is most in demand. The retailers were asked to quote for November, 1921, and for May, 1922, the prices of the same articles. In order to ascertain the change in expenditure, the quantities and life as given in the Indicator Lists of the Basic Wage Commission were used for "weighting" purposes to arrive at a weekly expenditure for clothing. This weekly expenditure is then multiplied by weights in the same manner as is the weekly expenditure on rent, thus giving an aggregate expenditure comparable with the aggregate expenditure on food and groceries and on rent.

* See pages 22-25 of Labour Report No. 12.

With regard to Miscellaneous Expenditure, which covers a very wide field, inquiries were made as to variations in cost of fuel and light, household utensils, drapery, crockery, etc., and also with regard to other items included in the Indicator Lists for Miscellaneous Expenditure, and the aggregate expenditure on these items has been computed in the same manner as that for clothing.

The item Groceries (not Food) has been omitted from Miscellaneous Expenditure, as the index-numbers of this Bureau cover the items allowed for, such as soap, starch, blue, etc.

3. Period Selected as Base.—For the new index-numbers November, 1914, was adopted as base owing to the difficulty of securing information with regard to prices of clothing and miscellaneous items for earlier years, but they may be accepted as typical of immediately pre-war conditions.

4. Variations in Cost in the Capital Cities.†—The index-numbers in the following table show the variations not only in each city from period to period, but also as between the various cities at any given period. Thus, the increase in cost in the six capital cities from November, 1914, was greatest in November, 1920, when it amounted to 66.5 per cent. The increase in November, 1924, compared with November, 1914, was 41.7 per cent. Further, in November, 1924, the cost of the commodities and services included was greatest in Hobart (1,512) and least in Brisbane (1,316).

INDEX-NUMBERS, TOTAL HOUSEHOLD EXPENDITURE, CAPITAL CITIES.— 1914 TO 1924.

(NOTE.—Weighted average cost in November, 1914, for all articles in capital cities taken as base = 1,000).

Cities.	November.										
	1914.	1915.	1916.	1917.	1918.	1919.	1920.	1921.	1922.	1923.	1924.
Sydney	1,037	1,159	1,187	1,266	1,328	1,505	1,681	1,477	1,440	1,456	1,420
Melbourne .. .	986	1,117	1,124	1,194	1,294	1,437	1,704	1,475	1,417	1,471	1,431
Brisbane .. .	898	1,046	1,016	1,114	1,222	1,408	1,511	1,330	1,275	1,356	1,316
Adelaide .. .	997	1,114	1,140	1,186	1,265	1,447	1,657	1,411	1,370	1,455	1,453
Perth .. .	1,001	1,059	1,123	1,166	1,238	1,404	1,552	1,409	1,301	1,339	1,369
Hobart .. .	997	1,110	1,121	1,253	1,311	1,489	1,724	1,536	1,452	1,527	1,512
Weighted Average	1,000	1,123	1,140	1,213	1,295	1,461	1,665	1,454	1,402	1,446	1,417

§ 5. Control of Trade, Prices, and House Rents.

In previous issues of the Year Book information was given as to the legislative measures enacted by Federal and State Parliaments for the control of trade, prices, and house rents.

In Queensland the Profiteering Prevention Act 1920, and the Fair Rents Act 1920, and in New South Wales the Fair Rents Act 1915, amended in 1920, are still in force. Similar legislative measures enacted by the other States and by the Federal Parliament have been repealed or allowed to expire by effluxion of time.

B. WAGES.

§ 1. Operations under Wages Board and Industrial Arbitration Acts.

1. General.—Particulars of the operations of Wages Boards and Industrial and Arbitration Courts under the Commonwealth and State Acts for the regulation of wages, hours, and conditions of labour were first compiled to the 31st December, 1913, and reviews to the end of approximately quarterly periods appear in Labour Bulletins and Quarterly Summaries to the 31st December, 1924.

† In Labour Report No. 14, index-numbers are given showing the relative cost from November, 1921, to November, 1923, in 30 of the principal towns in Australia.

2. Awards, Determinations, Industrial Agreements.—The following table gives a summary for each quarter of the years 1923 and 1924 :—

AWARDS, DETERMINATIONS, AND INDUSTRIAL AGREEMENTS, 1923 AND 1924.

State and Commonwealth.	1st Quarter.		2nd Quarter.		3rd Quarter.		4th Quarter.		Full Year.	
	Awards or Determinations made.	Agreements Filled.	Awards or Determinations made.	Agreements Filled.	Awards or Determinations made.	Agreements Filled.	Awards or Determinations made.	Agreements Filled.	Awards or Determinations made.	Agreements Filled.
1923.										
New South Wales	8	16	18	9	15	13	19	15	60	53
Victoria ..	12	..	24	..	19	..	27	..	82	..
Queensland ..	4	..	6	5	7	4	14	6	31	15
South Australia	5	..	7	2	10	1	16	2	38	5
Western Australia	1	6	1	3	10	2	1	6	13	17
Tasmania ..	5	..	6	..	..	1	3	..	14	1
Cwlth. Court ..	4	7	18	14	22	5	20	8	64	34
Cwlth. Pub. Ser. Arbitrator ..	1	..	..	..	1	..	2	..	4	..
Total ..	40	29	80	33	84	26	102	37	306	125
1924.										
New South Wales	11	9	14	20	15	21	18	6	58	56
Victoria ..	42	..	15	..	11	..	10	..	78	..
Queensland ..	3	1	8	6	17	6	27	7	55	20
South Australia	19	2	6	..	9	1	24	1	58	4
Western Australia	..	12	5	6	3	6	3	13	11	37
Tasmania ..	1	..	3	1	6	..	3	1	13	2
Cwlth. Court ..	2	17	7	11	13	6	22	11	44	45
Cwlth. Pub. Ser. Arbitrator ..	1	..	1	..	..	..	2	..	4	..
Total ..	79	41	59	44	74	40	109	39	321	164

3. Boards Authorized, Awards, etc., in Force.—(i) *Totals for Australia.* The following table gives particulars at the dates specified for all States—excepting Western Australia, in which State there is no provision for Boards—of Boards authorized, etc., and, including operations under the Commonwealth and the Western Australian Arbitration Acts, of the number of awards, determinations, and industrial agreements in force :—

BOARDS AUTHORIZED, ETC., AWARDS, ETC.—AUSTRALIA, 1913, 1923, AND 1924.

Dates.	Boards Authorized.	Boards Con- stituted.	Boards which had made Awards or Deter- minations.	Awards or Deter- minations in Force.(a)	Industrial Agree- ments in Force.
31st December, 1913	505	501	387(b)	575(c)	401
30th June, 1923	572	564	517	1,042	731
31st December, 1923	574	566	523	1,088	740
30th June, 1924	575	567	528	1,095	635
31st December, 1924	575	538(d)	520	1,111	549

(a) Including awards made by Arbitration Courts and the Commonwealth Public Service Arbitrator. (b) Owing to the fact that a number of awards under the New South Wales Industrial Disputes Act (1908) were still in force, the Boards constituted for such industries under the Industrial Arbitration Act (1912) had not made any awards. (c) Excluding awards or determinations which expired in New South Wales (under the Act of 1908) on 31st December, 1913. (d) During 1924 the majority of South Australian Boards expired and all had not been reconstituted at the close of the year.

Considerable expansion of the principle of the fixation of a legal minimum rate of wage and of working conditions took place during the eleven years ended 31st December, 1924. At the end of 1924, 536 additional awards or determinations were in force in Australia. The number of industrial agreements* made and in force under the various Acts increased during the eleven years under review by 148.

(ii) *Summary for States.* The following table gives particulars for each State and the Commonwealth of the number of Boards authorized, etc., for the years specified :—

BOARDS AUTHORIZED, AWARDS, ETC.—SUMMARY, 1913, 1923, AND 1924.

Particulars.	At 31st Dec.	Commonwealth.		N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Total.
		Court.	Pub. Ser. Arb.							
<i>Boards Authorized, etc. (a)—</i>										
Boards authorized	1913	..	..	(b) 216	135	75	56	..	23	505
	1923	..	..	274	177	..	76	..	47	574
	1924	..	..	274	176	2	75	..	48	575
Boards constituted	1913	..	..	(b) 223	132	74	51	..	21	501
	1923	..	..	274	175	..	76	..	41	566
	1924	..	..	274	174	2	46	..	42	538
Boards which have made Awards or Determinations	1913	..	..	123	123	74	47	..	19	386
	1923	..	..	258	166	..	66	..	33	523
	1924	..	..	259	158	..	65	..	38	520
<i>Awards and Determinations—</i>										
Awards and Determinations in force	1913	17	..	(c) 265	127	73	54	18	21	575
	1923	141	29	318	171	216	78	87	48	1,088
	1924	146	29	320	174	221	81	91	49	1,111
<i>State Awards and Determinations—</i>										
Applying to Whole State	1913	..	..	32	8	3	..	..	15	58
	1923	..	..	31	43	65	9	5	39	192
	1924	..	..	31	65	65	7	5	39	212
Applying to Metropolitan area	1913	..	..	58	..	28	53	13	1	153
	1923	..	..	85	..	48	47	49	..	230
	1924	..	..	90	1	50	50	51	..	242
Applying to Metropolitan and Country areas	1913	..	..	49	105	1	..	1	5	161
	1923	..	..	137	116	43	2	7	7	312
	1924	..	..	136	94	44	2	8	7	291
Applying to Country areas	1913	..	..	126	14	41	1	4	..	186
	1923	..	..	65	11	60	20	26	..	184
	1924	..	..	63	14	62	22	27	3	191
<i>Commonwealth Court Awards</i>										
Awards in force in each State	1913	..	..	13	17	15	16	9	13	..
	1923	..	..	81	109	32	79	40	62	..
	1924	..	..	87	110	32	80	38	62	..
<i>Commonwealth Public Service Arbitrator—</i>										
Determinations in force in each State	1923	..	..	28	25	25	26	26	24	..
	1924	..	..	28	26	25	25	25	24	..
<i>Industrial Agreements—</i>										
In force	1913	228	..	75	..	5	11	82	..	401
	1923	454	..	116	..	50	43	72	5	740
	1924	221	..	135	..	62	44	85	2	549
Commonwealth Agreements in force in each State	1913	..	..	132	129	68	62	57	61	..
	1923	..	..	64	284	24	48	38	18	..
	1924	..	..	68	96	24	24	11	19	..
Number of Persons covered by State Awards and Determinations (estimated)	1924	..	..	275,000	192,300	163,600	32,000	35,000	19,000	716,900

(a) The figures for New South Wales are exclusive of Demarcation Boards.

(b) Including boards which were subsequently dissolved, owing to alteration in the sectional arrangement of industries and callings.

(c) Omitting a number of awards which expired on the 31st December, 1913.

§ 2. Rates of Wage and Hours of Labour.

1. *General.*—The collection of information respecting the current rates of wage payable in different callings and in occupations in various industries was first undertaken by the Commonwealth Bureau of Census and Statistics in the early part of the year 1913. The particulars acquired were obtained primarily from awards, determinations and agreements, under Commonwealth and State Acts, and therefore show the minimum rates prescribed. They refer generally to the capital city in each State, but in industries which obviously

* The registration of industrial agreements is not provided for under the Victorian Act, but such agreements may be registered and filed under the provisions of the Commonwealth Conciliation and Arbitration Act.

are not carried on in the capital cities, *e.g.*, mining, agriculture, etc., the rates in the more important centres have been taken. In cases where no award, determination, or agreement is in force, particulars are given, where available, of the ruling union or predominant rate as furnished by employers or secretaries of trade unions. The total number of occupations for which particulars of wages are available back to 1901 is 652. Since 1913, when the scope of the inquiry was extended to 930 specified industries and 4,256 adult occupations (3,948 male and 308 female), the number of occupations included in the comparative computations has been kept constant.

The index-numbers for male adult workers were computed with the weighted average wage in 1911 as base (=1,000) in order that comparisons might more readily be made between these index-numbers and the retail prices index-numbers which are also computed to the year 1911 as base. In the case of females, however, it has not been possible to secure information for years prior to 1914, and the index-numbers are therefore computed with the weighted average rate of wage payable to adult female workers in Australia at 30th April, 1914, as base (=1,000).

An extensive tabular presentation of the minimum rates of wage for adult male and female workers in the main occupations in the capital city of each State is given in the Appendix to Labour Report No. 15.

2. Weekly Rates of Wage, 1920 to 1924.—(i) *General*. The arithmetical average of the rates of wage given in the Appendix referred to furnishes the basis for the computation of relative weighted wages in the different States and industrial groups.

(ii) *Adult Males—States*. The following table gives the weighted average nominal weekly rates of wage payable to adult male workers at the 31st December in the years 1920 to 1924 for a full week's work in each State and Australia, together with index-numbers computed with the average for Australia for the year 1911 as base (=1,000).

WAGES.—ADULT MALES—WEIGHTED AVERAGE NOMINAL WEEKLY RATE PAYABLE FOR A FULL WEEK'S WORK, AND WAGE INDEX-NUMBERS, 31st DECEMBER, 1920 TO 1924.

NOTE.—Index-numbers based on the average wage for Australia in 1911 (51s. 3d.) as base (=1,000). The index-numbers in this table are comparable throughout.

Particulars.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Australia. (a)
No. of Occupations Included ..	874	909	627	567	489	482	3,948

RATES OF WAGE.

	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.
31st December, 1920 ..	94	0	86	1	91	6	82	8	89	9	85	9	89	10
31st December, 1921 ..	95	10	93	7	96	8	89	5	95	0	91	8	94	6
31st December, 1922 ..	91	6	91	4	93	10	87	6	93	9	88	5	91	6
31st December, 1923 ..	94	6	95	7	94	2	90	9	94	2	92	4	94	4
31st March, 1924 ..	94	1	96	3	94	4	90	6	93	9	92	7	94	4
30th June, 1924 ..	94	0	95	10	94	8	91	1	93	9	92	7	94	3
30th September, 1924 ..	93	11	95	6	95	9	91	4	93	10	92	5	94	4
31st December, 1924 ..	93	6	95	5	95	9	91	10	94	8	92	6	94	3

INDEX-NUMBERS.

	1,835	1,679	1,785	1,613	1,751	1,674	1,752
31st December, 1920 ..	1,835	1,679	1,785	1,613	1,751	1,674	1,752
31st December, 1921 ..	1,869	1,826	1,886	1,745	1,853	1,788	1,844
31st December, 1922 ..	1,785	1,783	1,830	1,708	1,829	1,726	1,785
31st December, 1923 ..	1,844	1,865	1,837	1,770	1,838	1,802	1,840
31st March, 1924 ..	1,835	1,878	1,841	1,765	1,828	1,806	1,840
30th June, 1924 ..	1,835	1,870	1,847	1,778	1,829	1,807	1,840
30th September, 1924 ..	1,832	1,863	1,868	1,783	1,831	1,803	1,840
31st December, 1924 ..	1,824	1,862	1,868	1,791	1,847	1,805	1,839

(a) Weighted average.

The results show that at the 31st December, 1924, the weighted average nominal weekly rate of wage was highest in Queensland, followed in the order named by Victoria, Western Australia, New South Wales, Tasmania, and South Australia. In all States wages increased rapidly from December, 1919, to the end of 1921. During 1922, however, the average declined on account of adjustments made in accordance with the decrease in the cost of living. In 1923 the average wage increased in each State. During 1924 wages decreased in New South Wales and Victoria, but there was sufficient movement in the opposite direction in the remaining States to allow the weighted average for Australia as a whole to remain practically stationary. The largest percentage increase during the period under review was in South Australia, with 11.0 per cent., followed by Victoria, 10.9 per cent., Tasmania 7.8 per cent., Western Australia 5.5 per cent., and Queensland 4.6 per cent. A decrease of 0.6 per cent. occurred in New South Wales. The increase in the weighted average for Australia was 5.0 per cent.

(iii) *Adult Males—Industrial Groups.* The following table shows (a) the average weekly rate of wage in each of the fourteen industrial groups, (b) the weighted average wage for all groups combined, and (c) index-numbers based on the average wage for all groups in 1911 (51s. 3d.), as base (=1,000):—

WAGES.—ADULT MALES—WEIGHTED AVERAGE NOMINAL WEEKLY RATE FOR A FULL WEEK'S WORK, AND WAGE INDEX-NUMBERS IN EACH INDUSTRIAL GROUP, 31st DECEMBER, 1920 TO 1924.

NOTE.—Index-numbers for each industrial group and all industrial groups, based on the average wage for all groups in 1911 (51s. 3d.), as base (=1,000). The index-numbers in this table are comparable throughout.

Industrial Group.		Weighted Average Nominal Weekly Rate of Wage, and Index-Number at—							
		31st Dec., 1920.	31st Dec., 1921.	31st Dec., 1922.	31st Dec., 1923.	31st March, 1924.	30th June, 1924.	30th Sept., 1924.	31st Dec., 1924.
		s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
I. Wood, Furniture, etc.	Wage	95.1	98.2	95.4	99.2	99.9	99.9	99.9	99.7
	Index-No.	1,855	1,916	1,860	1,935	1,946	1,946	1,947	1,943
II. Engineering, etc.	Wage	92.5	93.2	93.10	97.4	97.9	97.9	97.2	97.5
	Index-No.	1,803	1,915	1,832	1,900	1,907	1,908	1,896	1,901
III. Food, Drink, etc.	Wage	89.3	93.10	91.10	94.2	93.10	94.0	93.11	94.0
	Index-No.	1,742	1,832	1,792	1,837	1,831	1,833	1,832	1,835
IV. Clothing, Boots, etc.	Wage	86.5	93.3	91.1	93.11	94.0	94.2	93.0	95.0
	Index-No.	1,637	1,819	1,777	1,833	1,835	1,837	1,815	1,815
V. Books, Printing, etc.	Wage	99.6	104.7	102.9	104.5	106.6	107.4	108.0	108.3
	Index-No.	1,941	2,040	2,004	2,037	2,078	2,094	2,107	2,113
VI. Other Manufacturing	Wage	88.11	95.0	91.11	96.2	95.3	95.3	95.6	95.6
	Index-No.	1,736	1,854	1,793	1,876	1,859	1,859	1,863	1,863
VII. Building	Wage	95.7	102.5	100.5	103.8	104.5	104.3	105.1	105.6
	Index-No.	1,865	1,999	1,960	2,023	2,037	2,035	2,050	2,055
VIII. Mining, etc.	Wage	103.10	105.4	103.8	104.5	104.1	103.11	103.11	104.2
	Index-No.	2,026	2,056	2,022	2,037	2,032	2,028	2,028	2,033
IX. Railways, etc.	Wage	93.1	97.5	93.4	97.8	96.9	96.5	97.3	96.11
	Index-No.	1,816	1,901	1,821	1,906	1,888	1,881	1,898	1,892
X. Other Land Transport	Wage	87.3	90.2	88.5	92.6	90.6	90.0	89.9	89.4
	Index-No.	1,702	1,760	1,725	1,806	1,766	1,756	1,751	1,744
XI. Shipping, etc. (a)	Wage	88.0	101.8	99.9	102.4	99.9	98.11	98.6	97.10
	Index-No.	1,716	1,984	1,947	1,997	1,946	1,931	1,923	1,908
XII. Agricultural, etc. (b)	Wage	87.1	89.0	83.11	85.8	85.11	85.11	86.0	85.10
	Index-No.	1,699	1,736	1,637	1,671	1,676	1,677	1,670	1,675
XIII. Domestic, etc. (b)	Wage	80.6	84.2	82.4	84.6	85.3	85.9	85.10	86.0
	Index-No.	1,571	1,642	1,606	1,648	1,663	1,674	1,675	1,678
XIV. Miscellaneous	Wage	84.11	91.1	88.8	92.3	92.5	92.6	92.4	92.2
	Index-No.	1,656	1,778	1,730	1,800	1,804	1,804	1,802	1,798
All Industrial Groups (c)	Wage	89.10	94.6	91.6	94.4	94.4	94.3	94.4	94.3
	Index-No.	1,752	1,844	1,785	1,840	1,840	1,840	1,840	1,839

(a) Including the value of victualling and accommodation where supplied. (b) Including the value of board and lodging where supplied. (c) Weighted average.

The foregoing table shows that the rate of increase in the weighted average weekly wage in occupations and callings classified in the fourteen industrial groups during the period 31st December, 1920 to 1924, was greatest in Group XI. (Shipping), 11.2 per cent., followed in the order named by Groups VII. (Building), 10.3 per cent., V. (Books, Printing, etc.), 8.9 per cent., and XIV. (Miscellaneous), 8.6 per cent. The smallest increase occurred in Group VIII. (Mining), 0.3 per cent., while one group (Agricultural, etc.), shows a

decrease of 1.4 per cent. In nine of the groups the increase was more, and in five groups less than the increase in the weighted average for all groups. During 1924 there was a decline in the averages for eight groups, with increases in the remainder. The largest decreases occurred in Group XI. (Shipping), etc., 4.5 per cent., followed by Group X. (Other Land Transport), 3.4 per cent. The greatest increases occurred in Groups V. (Books, Printing, etc.), and XIII. (Domestic, etc.), with 3.7 and 1.8 per cent. respectively. The weighted average wage for all groups combined shows no appreciable movement during the twelve months.

(iv) *Adult Females—States.* The following table shows the weighted average weekly rate of wage payable to adult female workers for a full week's work in each State and Australia at the dates specified. Index-numbers are given also for each State based on the average weekly wage at the end of each of the periods indicated, computed with the weighted average wage for all States at the 30th April, 1914, as base (=1,000).

WAGES.—ADULT FEMALES—WEIGHTED AVERAGE NOMINAL WEEKLY RATE PAYABLE FOR A FULL WEEK'S WORK, AND WAGE INDEX-NUMBERS, 31st DECEMBER, 1920 TO 1924.

NOTE.—Index-numbers based on the average wage for Australia at the 30th April, 1914 (27s. 2d.) as base (=1,000). The index-numbers in this table are comparable throughout.

Particulars.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Aus- tralia.(a)
No. of Occupations Included ..	85	87	37	47	24	28	308

RATES OF WAGE.

	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
31st December, 1920 ..	46 0	43 1	44 11	40 7	52 11	41 10	44 6
31st December, 1921 ..	49 0	47 10	50 3	45 2	56 4	47 6	48 8
31st December, 1922 ..	47 8	48 0	48 2	44 0	56 4	47 7	47 11
31st December, 1923 ..	49 3	49 5	50 5	46 4	56 4	48 6	49 6
31st March, 1924 ..	49 3	50 2	51 3	46 9	56 8	49 2	49 11
30th June, 1924 ..	49 3	50 2	51 3	46 9	56 8	50 7	50 0
30th September, 1924 ..	49 0	49 6	50 10	46 4	56 8	50 3	49 7
31st December, 1924 ..	49 1	49 7	50 10	46 6	56 11	50 3	49 7

INDEX-NUMBERS.

31st December, 1920 ..	1,695	1,586	1,652	1,495	1,947	1,540	1,637
31st December, 1921 ..	1,803	1,761	1,849	1,661	2,074	1,749	1,790
31st December, 1922 ..	1,754	1,767	1,771	1,620	2,075	1,751	1,763
31st December, 1923 ..	1,812	1,819	1,855	1,704	2,075	1,785	1,821
31st March, 1924 ..	1,813	1,847	1,886	1,721	2,085	1,809	1,838
30th June, 1924 ..	1,813	1,845	1,886	1,721	2,085	1,863	1,839
30th September, 1924 ..	1,804	1,823	1,872	1,706	2,085	1,851	1,824
31st December, 1924 ..	1,807	1,824	1,872	1,710	2,094	1,850	1,826

(a) Weighted Average.

As in the case of male occupations, female wages increased rapidly up to December, 1921, but in 1922 reductions were recorded. The decrease over the whole of Australia was relatively much less than in the case of males. There was an increase in each State during 1923, with the exception of Western Australia, where the wage remained stationary. The figures for 31st December, 1924, indicate a very slight increase so far as Australia is concerned, and in respect of individual States increases in all excepting New South Wales, the greatest increase being 1s. 9d. in Tasmania. The advance in the Australian average during the period was 11.5 per cent.

(v) *Adult Females—Industrial Groups.* The following table gives particulars of the weighted average weekly rate of wage payable to adult female workers in the industrial groups in which they are mainly employed, and in all groups combined. Taking the average wage for all groups at the 30th April, 1914, as base (=1,000), index-numbers are given computed on the average rate of wage ruling at the end of each period indicated.

WAGES.—ADULT FEMALES—WEIGHTED AVERAGE NOMINAL WEEKLY RATE PAYABLE FOR A FULL WEEK'S WORK, AND WAGE INDEX-NUMBERS IN EACH INDUSTRIAL GROUP, 31st DECEMBER, 1920, TO 1924.

NOTE.—Index-numbers for each Industrial Group and all Industrial Groups, based on the average wage for all groups at 30th April, 1914 (27s. 2d.), as base (=1,000). The index-numbers in this table are comparable throughout.

Date.	Industrial Group.					
	III. Food, Drink, etc.	IV. Clothing, Boots, etc.	I., II., V. and VI., All Other Manufacturing.	XIII. Domestic, Hotels, etc. (a).	XIV. Miscellaneous.	All Groups (b).
RATES OF WAGE.						
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
31st December, 1920 ..	41 10	43 5	44 0	46 3	46 2	44 6
31st December, 1921 ..	43 9	48 7	48 0	48 6	50 0	48 8
31st December, 1922 ..	43 3	47 10	47 4	48 3	48 9	47 11
31st December, 1923 ..	44 1	50 1	48 10	49 5	49 6	49 6
31st March, 1924 ..	44 11	50 1	49 7	49 6	51 3	49 11
30th June, 1924 ..	44 11	50 1	49 5	49 6	51 3	50 0
30th September, 1924 ..	44 11	49 6	49 4	49 6	50 7	49 7
31st December, 1924 ..	45 2	49 7	49 6	49 7	50 7	49 7
INDEX-NUMBERS.						
31st December, 1920 ..	1,538	1,597	1,619	1,701	1,700	1,637
31st December, 1921 ..	1,609	1,789	1,766	1,787	1,841	1,790
31st December, 1922 ..	1,593	1,762	1,741	1,777	1,794	1,763
31st December, 1923 ..	1,622	1,842	1,799	1,819	1,821	1,821
31st March, 1924 ..	1,654	1,842	1,824	1,823	1,885	1,838
30th June, 1924 ..	1,654	1,845	1,817	1,823	1,885	1,839
30th September, 1924 ..	1,654	1,823	1,816	1,823	1,862	1,824
21st December, 1924 ..	1,661	1,826	1,821	1,824	1,862	1,826

(a) Including the value of board and lodging, where supplied. (b) Weighted Average.

The greatest increase in the weekly rate of wage occurred in Group IV. (Clothing, Boots, etc.), 14.3 per cent., followed in the order named by Groups I., II., V., and VI. (All Other Manufacturing), 12.5 per cent., XIV. (Miscellaneous), 9.5 per cent., III. (Food, Drink, etc.), 8.0 per cent., and XIII. (Domestic, Hotels, etc.), 7.2 per cent. The weighted average weekly rate for all groups was 11.5 per cent. higher at the end of 1924 than at the 31st December, 1920.

The average wage for females in each industrial group, excepting IV. (Clothing, Boots, etc.), increased during the year 1924, the largest increase being 2.4 per cent. in Group III., followed in the order named by Groups XIV., 2.3 per cent., I., II., V., and VI., 1.2 per cent., and XIII., 0.3 per cent. Group IV. decreased 0.9 per cent. The weighted average for all groups increased by 0.3 per cent.

3. Relative Hours of Labour and Hourly Rates of Wage, 1920 to 1924.—(i) General. The rates of wage referred to in preceding paragraphs relate to the minimum payable for a full week's work. The number of hours constituting a full week's work differs, however, in many instances between various trades and occupations in each State, and between the same trades and occupations in the several States. In order to secure what may be for some purposes a more adequate standard of comparison, it is desirable to reduce the comparison to a common basis, viz., the rate of wage per hour. Particulars are given in the following table classified according to States, for male and female occupations separately, at the end of the years 1920 to 1924. These particulars relate to (a) the weighted average nominal weekly wage, (b) the weighted average number of working hours constituting a full week's work, and (c) the weighted average hourly wage. The weighted average weekly wage relates to all industrial groups combined, and includes the value of board and lodging where supplied in land occupations, and the value of victualling in

marine occupations, whereas the number of working hours and the hourly wage relate to all industrial groups other than Groups XI. (Shipping), and XII. (Agricultural, Pastoral, etc.). Many of the occupations included in these two groups are of a casual or seasonal nature, and the hours of labour are not generally regulated either by awards or determinations of industrial tribunals or otherwise, hence the necessary data for the computation of the average number of working hours are not available.

The general effect of reducing the rates of wage to a common basis (*i.e.*, per hour) is to eliminate on comparison any apparent difference between the several States which may be due to unequal working time.

(ii) *Adult Males and Females.* Particulars for the last five years for adult males and females are given in the table hereunder:—

**WEEKLY AND HOURLY WAGES AND HOURS OF LABOUR.—ADULT WORKERS,
1920 TO 1924.**

Date.	Particulars.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Aus.
MALE WORKERS.								
31st Dec. 1920	Weekly Wage (a)	s. d. 94 0	s. d. 86 1	s. d. 91 6	s. d. 82 8	s. d. 89 9	s. d. 85 9	s. d. 89 10
	Working Hours (b)	47.51	47.19	45.63	47.29	46.53	47.33	47.07
	Hourly Wage (b)	2/-	1/10	2/0½	1/8½	1/11¼	1/10	1/11
31st Dec., 1921	Weekly Wage (a)	s. d. 95 10	s. d. 93 7	s. d. 96 8	s. d. 89 5	s. d. 95 0	s. d. 91 8	s. d. 94 6
	Working Hours (b)	45.66	46.95	45.52	47.07	46.24	46.84	46.22
	Hourly Wage (b)	2/1½	2/0½	2/2	1/10½	2/1	1/11½	2/0½
31st Dec., 1922	Weekly Wage (a)	s. d. 91 6	s. d. 91 4	s. d. 93 10	s. d. 87 6	s. d. 93 0	s. d. 88 5	s. d. 91 6
	Working Hours (b)	46.05	46.99	45.51	47.00	46.41	46.93	46.38
	Hourly Wage (b)	2/0½	1/11¼	2/1½	1/10½	2/0½	1/10½	2/-
31st Dec., 1923	Weekly Wage (a)	s. d. 96 6	s. d. 93 0	s. d. 95 9	s. d. 91 8	s. d. 95 2	s. d. 93 3	s. d. 96 3
	Working Hours (b)	46.73	47.06	45.51	47.00	46.66	47.27	46.70
	Hourly Wage (b)	2/0½	2/1	2/1½	1/11½	2/0½	1/11½	2/0½
31st Dec., 1924	Weekly Wage (a)	s. d. 93 6	s. d. 95 5	s. d. 95 0	s. d. 91 10	s. d. 94 8	s. d. 92 6	s. d. 94 2
	Working Hours (b)	46.75	46.99	45.40	46.98	46.52	47.26	46.66
	Hourly Wage (b)	2/0½	2/1	2/1½	1/11½	2/0½	1/11½	2/0½
FEMALE WORKERS.								
31st Dec., 1920	Weekly Wage	s. d. 46 0	s. d. 43 1	s. d. 44 11	s. d. 40 7	s. d. 52 11	s. d. 41 10	s. d. 44 6
	Working Hours	46.83	46.23	46.09	46.51	46.20	47.86	46.47
	Hourly Wage	-/11½	-/11½	-/11½	-/10½	1/1½	-/10½	-/11½
31st Dec., 1921	Weekly Wage	s. d. 49 0	s. d. 47 10	s. d. 50 3	s. d. 45 2	s. d. 56 4	s. d. 47 6	s. d. 48 8
	Working Hours	45.06	46.04	45.66	46.10	45.97	47.36	45.69
	Hourly Wage	1/1	1/0½	1/1½	-/11½	1/2½	1/-	1/0½
31st Dec., 1922	Weekly Wage	s. d. 47 8	s. d. 43 0	s. d. 43 2	s. d. 44 0	s. d. 56 4	s. d. 47 7	s. d. 47 11
	Working Hours	45.33	46.14	45.60	46.10	45.97	47.86	45.82
	Hourly Wage	1/0½	1/0½	1/0½	-/11½	1/2½	1/-	1/0½
31st Dec., 1923	Weekly Wage	s. d. 49 3	s. d. 49 5	s. d. 50 5	s. d. 46 4	s. d. 56 4	s. d. 48 0	s. d. 49 6
	Working Hours	45.81	46.13	45.60	46.10	45.97	47.86	45.98
	Hourly Wage	1/1	1/0½	1/1½	1/0	1/2½	1/0½	1/1
31st Dec., 1924	Weekly Wage	s. d. 49 1	s. d. 49 7	s. d. 50 10	s. d. 46 6	s. d. 56 11	s. d. 50 3	s. d. 49 7
	Working Hours	45.98	46.08	45.60	46.10	45.97	47.86	46.02
	Hourly Wage	1/0½	1/1	1/1½	1/-	1/2½	1/0½	1/1

(a) Weighted average weekly rate in all industrial groups combined. (b) Weighted average working hours per week, and computed hourly rates of wage for all industrial groups excepting Groups XI. (Shipping, etc.) and XII. (Agricultural, Pastoral, etc.). Working hours have not been generally regulated by industrial tribunals for occupations classified in industrial groups XI. and XII.

(iii) *Index-numbers.* There has been a diminution in each of the States during the years 1920 and 1921 in the number of working hours constituting a full week's work for male and female occupations, but during 1922 and 1923 certain increases in hours were recorded, principally in New South Wales. Each State, excepting New South Wales, shows a decrease for 1924. The effect of these changes on the hourly rate of wage as compared with the general increase in the weekly wage is readily seen from the comparative index-numbers given in the following table. In each instance (male and female occupations separately) the basis taken is the weighted average for Australia at the 30th April, 1914 (=1,000).

**WEEKLY AND HOURLY WAGE INDEX-NUMBERS.—ADULT WORKERS,
1920 TO 1924.**

NOTE.—Weighted average for Australia at 30th April, 1914, as base (=1,000).

Date.	Particulars.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Aus- tralia.
MALE WORKERS.								
31st Dec., 1920	{ Weekly Wage ..	1,706	1,561	1,659	1,500	1,628	1,556	1,629
	{ Hourly Wage ..	1,725	1,570	1,753	1,492	1,686	1,567	1,655
31st Dec., 1921	{ Weekly Wage ..	1,738	1,697	1,753	1,623	1,723	1,663	1,715
	{ Hourly Wage ..	1,817	1,741	1,865	1,637	1,796	1,675	1,779
31st Dec., 1922	{ Weekly Wage ..	1,660	1,657	1,702	1,588	1,701	1,605	1,660
	{ Hourly Wage ..	1,735	1,709	1,803	1,621	1,766	1,628	1,726
31st Dec., 1923	{ Weekly Wage ..	1,714	1,734	1,763	1,646	1,709	1,675	1,711
	{ Hourly Wage ..	1,775	1,790	1,808	1,676	1,754	1,696	1,771
31st Dec., 1924	{ Weekly Wage ..	1,696	1,731	1,737	1,665	1,717	1,679	1,710
	{ Hourly Wage ..	1,761	1,790	1,838	1,709	1,771	1,706	1,774
FEMALE WORKERS.								
31st Dec., 1920	{ Weekly Wage ..	1,695	1,586	1,652	1,495	1,947	1,540	1,637
	{ Hourly Wage ..	1,777	1,685	1,761	1,578	2,069	1,580	1,730
31st Dec., 1921	{ Weekly Wage ..	1,803	1,761	1,849	1,661	2,074	1,749	1,790
	{ Hourly Wage ..	1,965	1,878	1,989	1,770	2,215	1,794	1,923
31st Dec., 1922	{ Weekly Wage ..	1,754	1,767	1,771	1,620	2,075	1,751	1,763
	{ Hourly Wage ..	1,899	1,881	1,908	1,726	2,215	1,797	1,889
31st Dec., 1923	{ Weekly Wage ..	1,812	1,819	1,855	1,701	2,075	1,785	1,821
	{ Hourly Wage ..	1,943	1,937	1,997	1,815	2,215	1,831	1,944
31st Dec., 1924	{ Weekly Wage ..	1,807	1,824	1,872	1,710	2,094	1,850	1,826
	{ Hourly Wage ..	1,929	1,943	2,017	1,821	2,236	1,898	1,949

4. **Weighted Average Nominal Weekly Hours of Labour, Adult Males.**—The following table shows the weighted average nominal hours of labour (exclusive of overtime) in a full working week for male workers in each State and Australia at the 31st December, 1920 to 1924. Index-numbers are given also for each State based on the weekly average hours at the end of each of the periods specified, computed with the weighted average hours of labour for Australia at the 30th April, 1914, as base (=1,000).

**HOURS OF LABOUR.—WEEKLY INDEX-NUMBERS, ADULT MALES,
1920 TO 1924.**

NOTE.—Index-numbers based on the Average Hours of Labour for Australia at the 30th April, 1914 (48.93) as base (=1,000). The index-numbers in this table are comparable throughout. Overtime is excluded.

Date.	Particulars.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Aus- tralia.
31st Dec., 1920	{ Weighted average weekly hours of labour (a) ..	47.51	47.19	45.63	47.29	46.53	47.33	47.07
	{ Index-numbers ..	971	964	933	966	951	967	962
31st Dec., 1921	{ Weighted average weekly hours of labour (a) ..	45.66	46.95	45.52	47.07	46.24	46.84	46.22
	{ Index-numbers ..	933	960	930	962	945	957	945
31st Dec., 1922	{ Weighted average weekly hours of labour (a) ..	46.05	46.99	45.51	47.00	46.41	46.93	46.38
	{ Index-numbers ..	941	960	930	961	948	959	948
31st Dec., 1923	{ Weighted average weekly hours of labour (a) ..	46.73	47.06	45.51	47.00	46.66	47.27	46.70
	{ Index-numbers ..	955	962	930	961	954	966	954
31st Dec., 1924	{ Weighted average weekly hours of labour (a) ..	46.75	46.99	45.40	46.98	46.52	47.26	46.66
	{ Index-numbers ..	955	960	928	960	951	966	954

(a) Weighted average working hours per week for all industrial groups excepting Groups XI. (Shipping), and XII. (Agricultural, Pastoral, etc.), in which working hours have not been generally regulated by industrial tribunals.

There was a diminution in each State during the years 1920 and 1921 in the number of working hours constituting a full week's work for male occupations, but during 1922 and 1923, in certain States, especially in New South Wales, hours of labour were increased. Each State, excepting New South Wales, shows a decrease for 1924. The weighted average weekly hours index-number for Australia at the 31st December, 1924, was 954, as compared with 1,000 at 30th April, 1914, a reduction of 4.6 per cent. The lowest weighted average nominal weekly hours index-number at the 31st December, 1924, was that for Queensland (928), followed in the order named by Western Australia (951), New South Wales (955), South Australia and Victoria (960), and Tasmania (966).

5. *Nominal and Effective Wages, 1901 to 1924.*—(i) *Nominal Weekly Wage Index-numbers—Each State.* The following table shows the progress in nominal weekly rates of wage for all industries in each State, the weighted average wage for Australia in 1911 being taken as the base (=1,000). These results are based generally upon rates of wage prevailing in the capital city of each State, but in certain industries, such as mining, rates are necessarily taken for places other than the capital cities.

NOMINAL WAGE INDEX-NUMBERS, ADULT MALES, 1901 TO 1924.

(WEIGHTED AVERAGE WAGE FOR AUSTRALIA IN 1911=1,000.)

States.	Number of Occupations included.		1901.	1911.	1914.	1916.	1917.	1918.	1919.	1920.	1921.	1922.	1923.	1924.
	1901 to 1912.	1913 to 1924.												
New South Wales ..	158	874	858	1,003	1,096	1,208	1,257	1,286	1,498	1,835	1,869	1,785	1,844	1,824
Victoria ..	150	909	796	985	1,065	1,148	1,229	1,278	1,404	1,679	1,826	1,783	1,865	1,862
Queensland ..	87	627	901	997	1,042	1,177	1,273	1,356	1,534	1,785	1,886	1,830	1,837	1,868
South Australia ..	134	567	819	1,013	1,062	1,151	1,231	1,278	1,373	1,613	1,745	1,708	1,770	1,791
Western Australia ..	69	489	1,052	1,152	1,226	1,272	1,345	1,372	1,516	1,751	1,853	1,829	1,838	1,847
Tasmania ..	54	482	719	799	1,028	1,112	1,163	1,193	1,346	1,674	1,788	1,726	1,802	1,805
Australia (a) ..	652	3,948	848	1,000	1,085	1,184	1,252	1,296	1,462	1,752	1,844	1,785	1,840	1,839

(a) Weighted average.

NOTE.—The figures in the above table are comparable both horizontally and vertically.

During the period 1911 to the end of the year 1924 the average weekly rate of wage in New South Wales increased 82 per cent., in Victoria 89 per cent., in Queensland 88 per cent., in South Australia 77 per cent., in Western Australia 61 per cent., and in Tasmania 126 per cent., while the weighted average weekly rate for Australia increased 84 per cent.

(ii) *Effective Weekly Wage Index-numbers—States.* In comparing wages, two elements are of obvious importance, viz., (i) hours worked per day or week, and (ii) the cost of commodities and housing. Thus 60s. per week of 60 hours represents the same hourly rate as 48s. per week for 48 hours. Similarly, if the cost of commodities and housing increases 25 per cent., e.g., if the prices index-number rises from 1,000 to 1,250, then 60s. per week (the index-number being 1,250), is effectively equal only to 48s. (when the index-number was 1,000). Or, again, if the prices index-number falls from 1,000 to 750, then 60s. per week, when the index-number is 750, would have the same purchasing power as 80s. when the index-number was 1,000. Ignoring for the present the number of hours worked, and assuming that the real value of the average wages is to be measured by their purchasing power, the actual average wages paid may be reduced to their effective value by applying the prices index-numbers to the nominal wages index-numbers. The following table shows the effective wage index-numbers so ascertained in each State for each of the years indicated from 1901 to 1924.

In computing these effective wage index-numbers for years prior to 1914, the nominal wage index-numbers given in the preceding table have been divided by the price index-numbers in Section A §2. The resulting index-numbers show for each State and for Australia for the years specified the variations in effective wages. The nominal wage index-numbers for these earlier years are based on rates of wage current at the end of December, the only data available. For the years 1914 onward, however, the nominal wage-index numbers used are based on the average wage for the four quarters in each year, and in this respect differ from those in the preceding sub-sections. However, so far as the years 1901 and 1911 are concerned, as the movement in wages during any one year prior to 1914 was very slight, it is possible that if the wage data were available in quarters, the index-numbers used would approximate very closely to those based on averages for the year.

EFFECTIVE WEEKLY WAGE INDEX NUMBERS.—ADULT MALES, 1901 TO 1924.(a)

Particulars.	1901.	1911.	1914.	1916.	1917.	1918.	1919.	1920.	1921.	1922.	1923.	1924.
New South Wales ..	961	973.	906	835	882	890	875	911	1,079	1,113	1,040	1,069
Victoria ..	915	1,037.	961	858	929	925	904	875	1,038	1,102	1,036	1,097
Queensland ..	1,172	1,090.	1,038	944	1,041	1,042	990	1,036	1,244	1,273	1,214	1,232
South Australia ..	948	957.	929	863	961	934	901	853	1,027	1,090	1,036	1,051
Western Australia ..	1,024	1,023.	1,070	985	1,051	1,095	1,008	1,012	1,139	1,226	1,192	1,161
Tasmania ..	827	838.	942	839	875	869	840	830	977	1,053	1,000	1,017
Australia (b) ..	964	1,000.	948	864	930	932	907.	911	1,076	1,126	1,062	1,095

(a) As to the effect in abnormal periods, see Labour Report No. 6, pp. 20-2, Section IV., par. 3.
(b) Weighted average.

In the table above the effective wage index-numbers are computed to the one base, that of Australia for 1911. Subject to the qualification already referred to, which, as has been pointed out, does not materially affect the figures, the index-numbers are comparable in all respects, and comparisons may be made as to the increase or decrease in the effective wage index-number for any State over a period of years. Thus, comparing 1924 with 1901, and also with 1911, there has been an increase in the effective wage in all States.

(iii) *Effective Wages and Standard of Comfort.* In the preceding table particulars are given as to variations in effective wages in each State, due allowance having been made for variations in retail prices of commodities, though not for unemployment.

For years prior to 1913 the data available as to unemployment are so meagre that comparative results allowing for variations both in prices of commodities and in unemployment cannot be accurately computed for the several States. In the next table for these earlier years the percentage of unemployment for Australia and the nominal wage index-numbers relate to the end of the year. For 1914 and subsequent years the wages index-numbers, percentages of unemployment, and retail prices index-numbers are the average for the year. Column I. shows the nominal wage index-numbers, and Column II. the relative percentages unemployed. Applying these percentages to the numbers shown in Column I., and deducting the results from each corresponding index-number to allow for relative loss of time, the figures in Column III. are obtained. These figures are then re-computed with the year 1911 as base, and are shown in Column IV. In Column V. the retail prices index-numbers are shown, and in Columns VI. and VII. the effective wage index-numbers are given, firstly, for full work, and secondly, allowing for lost time. These are obtained by dividing the figures in Columns I. and IV. respectively by the corresponding figure in Column V. The resulting index-numbers show for Australia for the years specified the variations in effective wages, or in what may be called the "standard of comfort."*

* This expression must not be confused with "standard of living." A change in the standard of living necessarily involves a change in regimen (see Labour Report No. 1), that is, a change in the nature or in the relative quantity of commodities purchased, or both. A change in the "standard of comfort" merely implies a variation in effective wages, which variation may, or may not, result in, or be accompanied by, a change in the "standard of living."

A comparison between the figures in Columns I. and VI. gives the relation between the nominal rates of wage and the purchasing efficiency of these rates. The figures in Column VII. show variations in effective wages after allowing not only for variations in purchasing power of money, but for the relative extent of unemployment also.

WAGE INDEX-NUMBERS, NOMINAL AND EFFECTIVE, 1901 TO 1924.(a)

Year.	I. Nominal Wage Index- Numbers.	II. Percentage Unem- ployed.	Rate of Wage Index- Numbers, Allowing for Lost Time.		V. Retail Price Index- Numbers.	Effective Wage Index-Numbers.	
			III. Actual.	IV. Re-com- puted. (1911 = 1,000).		VI. Full Work.	VII. Allowing for Unemploy- ment.
1901	848	6.6	793	832	880	964	945
1906	866	6.7	808	848	902	960	940
1907	893	5.7	842	884	897	996	986
1908	900	6.0	846	888	951	946	934
1909	923	5.8	870	913	948	974	963
1910	955	5.6	901	945	970	985	974
1911	1,000	4.7	953	1,000	1,000	1,000	1,000
1912	1,051	5.5	993	1,042	1,101	955	946
1913	1,076	5.3	1,021	1,071	1,104	975	970
1914	1,081	8.3	991	1,040	1,140	948	912
1915	1,092	9.3	990	1,039	1,278	854	813
1916	1,144	5.8	1,078	1,131	1,324	864	854
1917	1,226	7.1	1,139	1,195	1,318	930	907
1918	1,270	5.8	1,196	1,255	1,362	932	921
1919	1,370	6.6	1,280	1,343	1,510	907	889
1920	1,627	6.5	1,521	1,596	1,785	911	894
1921	1,826	11.2	1,621	1,701	1,697	1,076	1,002
1922	1,801	9.3	1,634	1,715	1,600	1,126	1,072
1923	1,805	7.1	1,677	1,760	1,700	1,062	1,035
1924	1,840	8.9	1,676	1,759	1,681	1,095	1,046

(a) As to the effect in abnormal periods, see Section IV., par. 3, of Labour Report No. 6.

NOTE.—For years prior to 1914, the nominal wage index-numbers and the percentage unemployed relate to the end of the year only, but from 1914 onward these figures, in addition to those for retail prices, are averages for the whole year.

Compared with 1911 the effective wage in 1901 was 3.6 per cent. less for full work, and 5.5 per cent. less after allowance for unemployment. In connexion with the index-numbers in Column VII., unemployment was less in 1911—the base year, than in any other year. During the period 1912 to 1920, while wages increased steadily, prices increased at a greater rate, with the result that the purchasing power of wages was less in each of these years than in 1911, the lowest point reached being in 1915 when the full time index number was 14.6 per cent. less, or, allowing for unemployment, 18.7 per cent. less than for the base year. The first occasion on which the effective wage was higher than in 1911 was in 1921, when wages increased considerably while prices declined, the increase in effective wages being 7.6 per cent., but only 0.2 per cent. allowing for unemployment. Unemployment reached its “peak” during 1921. Both wages and prices fell in 1922, but the former less than the latter, resulting in a further increase in the effective wage. As wages remained practically stationary while prices rose, the effective wage for 1923 showed a decline.

In 1924 a rise in wages coincided with a fall in prices, and the effective wage increased. The average unemployment being greater than in the preceding year the increase in the effective wage was greater for full work than allowing for unemployment. In 1924 the effective wage was 9.5 per cent. (full time) and 4.6 per cent. (allowing for unemployment) higher than in 1911.

§ 3. Changes in Rates of Wage.

1. *General.*—A change in rate of wage is defined as a change in the weekly rates of remuneration of a certain class of employees, apart from any change in the nature of the work performed and apart from any revision of rates due to increased length of service or experience. It is obvious that under this definition certain classes of changes are excluded, such, for example, as (a) changes in rates of pay due to promotion, progressive increments, or, on the other hand, to reduction in pay or grade to inefficient workers, and (b) changes in average earnings in an occupation due to a change in the proportions which more highly-paid classes of workers bear to those paid at lower rates. Bonuses to employees have not been taken into account in the tabulations. Each single change recorded relates to a change in the rates of wage effected in a specific industry or calling, and includes any and all changes to workers in that industry, irrespective of the different number of separate occupations or trades affected. Moreover, in some instances a change may relate to the employees of a single employer or to those of a number of employers, according to the instrument or method operating to bring about the change.

There is a certain amount of overstatement as regards "persons affected," since in the quarterly adjustments of wages the same persons figure on four occasions. The difficulty of eliminating this factor has, however, been found too great to justify the labour involved. A further complication also arises from the overlapping of Commonwealth and State awards.

2. *Methods by which Changes were Effected, and Results.*—(i) *Summary, Australia, 1924.* The following table gives for Australia the number of changes in rates of wage, the number of workpeople affected, and the total net amount of increase in the weekly wage distribution brought about either without, or after, stoppage of work during the year 1924, as a result of the application of one or other of the methods set out in the tables:—

CHANGES IN RATES OF WAGE.—METHODS AND RESULTS, AUSTRALIA, 1924.(a)

Methods by which Changes were Effected.	Without Stoppage of Work.			After Stoppage of Work.			All Changes.		
	No. of Changes.	No. of Work-people Affected.	Total Net Amount of Increase per week.	No. of Changes.	No. of Work-people Affected.	Total Net Amount of Increase per Week.	No. of Changes.	No. of Work-people Affected.	Total Net Amount of Increase per week.
By direct negotiations ..	18	1,491	522	5	448	132	23	1,939	654
By negotiations, intervention or assistance of third party(a) ..	58	63,681	14,132	11	1,972	495	69	65,653	14,627
By award of Court under Commonwealth Act(a) ..	211	521,469	(b)14,636	..	..	..	211	521,469	(b)14,636
By agreement registered under Commonwealth Act(a) ..	80	34,401	(b)51	..	..	..	80	34,401	(b)51
By award or determination under State Acts ..	264	205,615	31,668	..	..	..	264	205,615	31,668
By agreement registered under State Acts ..	71	18,578	9,104	..	..	..	71	18,578	9,104
TOTAL(a) ..	702	845,235	40,739	16	2,420	627	718	847,655	41,366

(a) In this section of the table an Award or Agreement under the Commonwealth Conciliation and Arbitration Act and the Arbitration (Public Service) Act is counted as one change only, although such Award, Agreement, or Order may be operative in more than one State. (b) Decrease.

The total number of changes recorded during the year 1924 was 718, of which 264 or 36.7 per cent. of the total number were brought about by award or determination under State Industrial Acts and 211 by awards of the Commonwealth Court of Conciliation and Arbitration.

(ii) *Summary, Australia, 1920 to 1924.* So far as possible, the effect of awards or agreements is recorded in the figures for the year in which such awards or agreements are made and filed. In certain cases, however, the awards or agreements are made

retrospective as to the date on which the altered rate of wage has to be paid, and in others the particulars as to the number of workpeople affected and the effect of the change are difficult to ascertain.

CHANGES IN RATES OF WAGE.—METHODS AND RESULTS, AUSTRALIA. 1920 TO 1924.

Particulars.	By Voluntary Action of Employers.	By Direct Negotiations.	By Negotiations, Intervention or Assistance of Third Party.	By Award of Court under C'wealth Act.	By Agreement Registered under C'wealth Act.	By Award or Determination under State Act.	By Agreement Registered under State Act.	TOTAL (a)
1920.								
Number of Changes	28	333	23	64	163	978	135	1,724
Number of Workpeople affected	15,193	169,973	64,691	75,048	26,733	648,083	27,565	1,027,286
Amount of Increase per week £	4,597	85,469	38,441	24,807	11,608	315,728	14,058	494,708
1921.								
Number of Changes	4	148	18	66	55	594	87	972
Number of Workpeople affected	2,000	77,210	73,704	139,773	24,166	391,215	24,197	732,265
Amount of Increase per week £	565	20,711	26,286	44,360	12,209	76,814	4,713	185,658
1922.								
Number of Changes	..	21	36	65	53	595	54	824
Number of Workpeople affected	..	7,186	54,878	125,195	43,002	376,994	20,861	628,116
Amount of Increase per week £	..	1,905	5,122	6 12,307	6 4,242	6 58,266	6 2,774	6 70,562
1923.								
Number of Changes	..	33	35	169	64	569	60	939
Number of Workpeople affected	..	18,605	52,298	334,180	46,974	503,722	35,073	990,852
Amount of Increase per week £	..	2,488	1,124	46,438	6,633	42,614	4,721	104,018
1924.								
Number of Changes	..	23	69	211	80	264	71	718
Number of Workpeople affected	..	1,939	65,653	521,469	34,401	205,615	18,578	847,655
Amount of Increase per week £	..	654	14,627	6 14,636	6 51	31,668	9,104	41,366

(a) See footnote to preceding table. (b) Decrease.

The greatest number of changes was effected through the instrumentalities of the State Acts, and these comprised 64.6 per cent. of all changes in 1920, but only 46.7 per cent. in 1924, while the changes made under the Commonwealth Acts increased from 13.2 per cent. to 40.5 per cent. "Direct negotiations" between parties shows a marked decline in the later years. In 1920, 333 changes, or 19.3 per cent., of the total affecting 17 per cent. of all persons concerned in the changes of that year, were so brought about, whereas in 1924, only 23 changes (3.2 per cent.), affecting 1,939 persons, or 0.2 per cent. of the whole, resulted from this agency.

3. Number and Effect of Changes.—(i) General. The following tables give particulars of changes which occurred in each State during the years specified. As regards the number of persons affected, the figures refer to the total number of persons ordinarily engaged in the various industries, and the results as to the amount of increase in wages are computed for a full week's work for all persons ordinarily engaged in the several industries and occupations affected. In cases of changes in existing minimum rates under awards or determinations of industrial tribunals it has been assumed (in the absence of any definite information to the contrary) that the whole of the employees in each occupation received the minimum rates of wage before and after the change.

The figures given in regard to the amount of increase per week do not relate to the increase each week, but only to the increase in a single week on the assumption that the full number of persons ordinarily engaged in the particular trade or occupation affected by the change were employed during that week. It is obvious, therefore, that the aggregate effect per annum cannot be obtained without making due allowance for unemployment and for occupations in which employment is seasonal or intermittent. It is also clear that since unemployment and activity in all branches of industry may vary from year to year, and in many branches from season to season also, no accurate estimate of the actual effect of the changes in the total amount of wages received or paid per annum can be made until the determining factors have been investigated. These factors are (a) the amount of unemployment, and (b) the period of employment in seasonal industries.

Changes brought about by awards and agreements under the Commonwealth Conciliation and Arbitration Act, the Arbitration (Public Service) Act, and the Industrial

Peace Act 1920 are necessarily included hereunder as changes in each State to which such awards and agreements apply. The average increase per head per week is computed to the nearest penny.

(ii) *Summary—States, 1924.* During the year 1924 the number of increases in rates of wage recorded was in excess of the decreases.

CHANGES IN RATES OF WAGE.—NUMBER AND EFFECT, 1924.

State.	INCREASES.			DECREASES.			TOTAL RESULT OF ALL CHANGES.		
	Changes.	Work-people Affected.	Increase Per Week.	Changes.	Work-people Affected.	Decrease Per Week.	Changes.	Work-people Affected.	Net Increase Per Week.
			£			£			£
New South Wales	138	55,652	17,512	104	140,414	9,652	242	196,066	7,860
Victoria	134	119,819	32,697	169	218,942	25,385	303	338,761	7,312
Queensland	73	49,009	14,258	11	3,966	265	84	52,975	13,993
South Australia	156	74,317	10,510	59	36,944	2,675	215	111,261	7,835
Western Australia	74	19,923	3,373	32	20,675	1,494	106	40,598	1,879
Tasmania	65	12,396	2,222	41	13,748	887	106	26,144	1,335
N. Territory	1	35	15	..	..	..	1	35	15
Federal Capital Territory	1	30	1	..	..	..	1	30	1
Common to all States	3	6,642	5,028	30	75,143	3,892	33	81,785	1,136
Total	645	337,823	85,616	446	509,832	44,250	1,091	847,655	41,366

The preceding figures for changes in wages include all those which have occurred either through the operations of wage tribunals or as the result of direct negotiations between employers and employees. Many workers in all States come under the jurisdiction of awards made by the Federal Arbitration Court. The principle of quarterly adjustments adopted by that Court led to variations in all States during the year.

CHANGES IN RATES OF WAGE.—NUMBER AND EFFECT, 1920 TO 1924.

Particulars.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	N.T.	F.C.T.	(a) All States.	Aust.
No. of Changes	1920 734 1921 353 1922 444 1923 578 1924 242	354 247 137 246 303	300 233 132 65 84	231 166 131 148 215	209 108 60 90 106	154 77 64 100 106	7 1 1	.. .. 1 1 1	10 16 3 24 33	1,999 1,200 972 1,253 1,091
No. of Persons Affected	1920 454,610 1921 272,782 1922 363,909 1923 519,440 1924 196,066	258,211 238,084 90,172 276,094 338,761	145,464 115,722 78,791 30,051 52,975	76,605 44,696 35,722 63,209 111,261	55,489 22,695 18,547 32,057 40,598	28,317 14,783 16,038 25,918 26,144	703 71 35	.. .. 337 1,002 30	7,887 23,503 24,600 43,010 81,785	1,027,286 732,265 628,116 990,852 847,655
Total Net Amount of Increase per Week	1920 £ 228,186 1921 £ 38,371 1922 £ 642,930 1923 £ 53,868 1924 £ 7,860	£ 119,706 £ 77,425 £ 66,625 £ 36,934 £ 7,312	£ 69,748 £ 30,790 £ 614,836 £ 62,177 £ 13,993	£ 30,316 £ 13,409 £ 62,687 £ 9,784 £ 7,835	£ 25,195 £ 11,395 £ 61,589 £ 669 £ 1,879	£ 14,593 £ 6,370 £ 61,701 £ 1,755 £ 1,335	£ 684 620 15	£ 656 298 1	£ 6,280 £ 7,898 £ 6138 £ 3,645 £ 1,136	£ 494,708 £ 185,658 £ 670,562 £ 104,018 £ 41,366
Average Increase per Head per Week	1920 s. d. 10 0 1921 s. d. 2 10 1922 s. d. 62 4 1923 s. d. 2 9 1924 s. d. 0 10	s. d. 9 3 s. d. 6 6 s. d. 61 6 s. d. 2 8 s. d. 0 5	s. d. 9 7 s. d. 5 4 s. d. 63 9 s. d. 61 5 s. d. 5 3	s. d. 7 11 s. d. 6 0 s. d. 61 6 s. d. 3 11 s. d. 1 5	s. d. 9 1 s. d. 10 1 s. d. 61 9 s. d. 60 1 s. d. 0 11	s. d. 10 4 s. d. 8 7 s. d. 62 1 s. d. 1 4 s. d. 1 0	s. d. 19 6 s. d. 8 .. s. d. 65 8 s. d. 5 11 s. d. 8 7	s. d. .. s. d. 63 4 s. d. 5 11 s. d. 0 8	s. d. 15 11 s. d. 6 9 s. d. 60 1 s. d. 1 9 s. d. 0 3	s. d. 9 8 s. d. 5 1 s. d. 62 3 s. d. 3 0 s. d. 1 0

(a) Changes recorded in this column are common to all States, as the particulars relating to the number of workpeople affected and the net amount of increase per week in each State were not ascertainable. (b) Decrease.

The relative positions of the States in regard to the number of changes effected, and also in regard to the number of workers affected in each year naturally depend largely on the magnitude of the different industries and callings in which changes took place.

(iii) *Industrial Groups—Australia. Workpeople affected by Changes.* In the following table particulars are given of the number of changes, the number of persons (males and females) affected, and the total amount of increase per week, classified according to Industrial Groups throughout Australia during the years 1920 to 1924 :—

**CHANGES IN RATES OF WAGE.—INDUSTRIAL GROUPS, AUSTRALIA,
1920 TO 1924.(a)**

Particulars.	Industrial Groups.							
	I. Wood, Furniture, Timber, etc.	II. Engineering, Metal Works, etc.	III. Food, Drink, Tobacco, etc.	IV. Clothing, Hats, Boots, etc.	V. Books, Printing, etc.	VI. Other Manufacturing.	VII. Building.	VIII. Mines, Quarries, etc.
1920.								
Number of Changes	68	123	241	56	83	245	82	61
Number of Persons affected	44,732	74,853	81,876	55,345	19,757	71,671	61,552	47,865
Amount of increase per week	£ 19,015	29,145	41,383	21,271	11,088	31,126	41,059	30,385
1921.								
Number of Changes	22	31	105	45	28	156	27	22
Number of Persons affected	11,915	58,632	55,555	89,542	12,110	55,766	24,717	6,322
Amount of increase per week	£ 2,650	17,244	13,658	16,143	4,000	14,666	10,196	2,896
1922.								
Number of Changes	17	90	74	24	32	116	29	27
Number of Persons affected	14,824	68,844	34,987	13,793	13,533	64,285	48,603	17,716
Amount of decrease per week	£ 62,028	614,399	65,805	61,412	61,722	66,734	68,069	62,330
1923.								
Number of Changes	25	91	103	16	22	120	33	21
Number of Persons affected	60,724	102,475	72,851	19,593	10,445	82,785	79,685	18,223
Amount of increase per week	£ 6,209	12,258	3,594	(b)333	1,021	9,144	13,034	828
1924.								
Number of Changes	26	69	74	19	27	109	36	12
Number of Persons affected	62,728	79,067	43,685	55,155	8,803	78,843	66,596	12,100
Amount of increase per week	£ (b)2,506	(b)2,270	2,713	4,103	4,246	(b)1,881	7,806	580

Industrial Groups—continued.

Particulars.	IX. Rail and Tram Services.	X. Other Land Transport.	XI. Shipping, etc.	XII. Pastoral, Agricultural, etc.	XIII. Domestic, Hotels, etc.	XIV. Miscellaneous.	ALL GROUPS (a)
1920.							
Number of Changes	82	52	76	19	55	481	1,724
Number of Persons affected	136,854	28,532	16,842	26,580	34,235	326,542	1,027,286
Amount of increase per week	£ 54,959	11,605	11,871	20,701	12,258	158,842	494,708
1921.							
Number of Changes	67	32	44	10	39	294	972
Number of Persons affected	127,860	24,885	37,904	1,815	17,904	207,332	732,265
Amount of increase per week	£ 18,573	2,717	17,986	853	4,339	59,737	185,653
1922.							
Number of Changes	66	36	23	14	28	248	824
Number of Persons affected	86,161	12,603	28,432	56,292	15,663	152,380	628,116
Amount of increase per week	£ 615,311	62,075	6559	4,136	61,288	612,916	670,562
1923.							
Number of Changes	105	31	71	7	25	269	930
Number of Persons affected	155,830	23,510	79,466	24,720	21,724	238,821	960,852
Amount of increase per week	£ 11,990	237	6,873	9,647	3,117	26,399	104,018
1924.							
Number of Changes	44	20	54	10	24	201	718
Number of Persons affected	86,961	43,343	94,110	13,989	7,607	194,668	847,655
Amount of increase per week	£ 6,544	1,555	(b)5,350	4,749	1,834	19,243	41,366

(a) In this table an Industrial Award or Agreement under the Commonwealth Conciliation and Arbitration Act, the Arbitration (Public Service) Act, the Industrial Peace Act, or an Order of the War Precautions Coal Board is counted as one change only, although such Award, Agreement or Order may be operative in more than one State. (b) Decrease.

(iv) *Male and Female Occupations.* Included in the changes in rates of wage recorded in the table on page 581 are those which in the whole or part thereof affected female occupations. Particulars in respect of these changes in so far as they relate to the numbers of male and female workers affected, etc., are set out hereunder:—

**CHANGES IN RATES OF WAGE.—EFFECT IN MALE AND FEMALE
OCCUPATIONS, 1920 TO 1924.**

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Ter.	Fed. Cap. Ter.	All States. (a)	Australia.
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NUMBER OF MALE EMPLOYEES AFFECTED.

1920	385,118	202,972	126,306	66,824	48,088	24,213	703	..	7,812	862,036
1921	219,813	185,895	90,918	37,062	19,988	13,484	..	..	21,710	588,870
1922	322,813	85,005	64,473	34,085	18,248	14,473	..	337	24,600	564,034
1923	465,446	256,666	27,421	60,967	31,507	24,931	71	1,002	42,830	910,841
1924	181,779	295,591	38,271	95,743	37,185	24,100	35	30	76,994	749,725

NET AMOUNT OF INCREASE PER WEEK TO MALE EMPLOYEES.

1920	£ 207,403	£ 98,778	£ 63,432	£ 27,498	£ 22,157	£ 13,105	£ 684	£ ..	£ 6,192	£ 439,240
1921	26,735	68,087	26,649	12,079	10,737	6,119	..	..	6,891	157,297
1922	(b) 40,245	(b) 6,943	(b) 13,965	(b) 2,626	(b) 1,640	(b) 1,818	..	(b) 56	(b) 138	(b) 47,431
1923	50,954	33,902	(b) 2,290	9,270	(b) 123	1,893	(b) 20	298	3,654	97,538
1924	6,947	2,600	11,869	7,010	1,457	1,086	15	1	356	31,341

AVERAGE INCREASE PER HEAD PER WEEK TO MALE EMPLOYEES.

1920	s. d. 10 9	s. d. 9 9	s. d. 10 1	s. d. 8 3	s. d. 9 3	s. d. 10 10	s. d. 19 6	s. d. ..	s. d. 15 10	s. d. 10 2
1921	2 5	7 4	5 10	6 6	10 9	9 1	..	..	6 4	5 4
1922	(b) 2 6	(b) 1 8	(b) 4 4	(b) 1 6	(b) 1 10	(b) 2 6	..	(b) 3 4	(b) 0 1	(b) 2 5
1923	2 2	2 8	1 8	3 1	(b) 0 1	1 6	(b) 5 8	5 11	1 9	2 2
1924	0 9	0 2	6 2	1 6	0 9	0 11	8 7	0 8	0 1	0 10

NUMBER OF FEMALE EMPLOYEES AFFECTED.

1920	69,492	55,239	19,158	9,781	7,401	4,104	..	..	75	165,250
1921	52,969	52,189	24,804	7,634	2,707	1,299	..	..	1,793	143,395
1922	41,096	5,167	14,318	1,637	299	1,565	..	..	..	64,082
1923	53,994	19,428	2,630	2,242	550	987	..	..	180	80,011
1924	14,287	43,170	14,704	15,518	3,413	2,044	..	..	4,791	97,927

NET AMOUNT OF INCREASE PER WEEK TO FEMALE EMPLOYEES.

1920	£ 20,783	£ 20,928	£ 6,316	£ 2,818	£ 3,038	£ 1,488	£ ..	£ ..	£ 88	£ 55,459
1921	11,636	9,338	4,141	1,330	658	251	..	..	1,007	28,361
1922	(b) 2,685	318	(b) 871	(b) 61	51	117	..	..	..	(b) 3,131
1923	2,914	3,032	113	514	54	(b) 138	..	..	(b) 9	6,480
1924	913	4,712	2,124	825	422	249	..	..	780	10,025

AVERAGE INCREASE PER HEAD PER WEEK TO FEMALE EMPLOYEES.

1920	s. d. 6 0	s. d. 7 7	s. d. 6 7	s. d. 5 9	s. d. 8 3	s. d. 7 3	s. d. ..	s. d. ..	s. d. 23 6	s. d. 6 9
1921	4 5	3 7	3 4	3 6	4 10	3 10	..	..	11 3	3 11
1922	(b) 1 4	1 3	(b) 1 4	(b) 0 9	3 5	1 6	..	..	..	(b) 1 0
1923	1 1	3 2	0 10	4 7	2 0	(b) 0 3	..	..	(b) 1 0	1 8
1924	1 3	2 2	2 11	1 1	2 6	2 5	..	..	3 3	2 1

(a) Changes recorded in this column are common to all States, as the particulars relating to the number of workpeople affected and the net amount of increase per week in each State were not ascertainable. (b) Decrease.

C. EMPLOYMENT.

§ 1. Industrial Disputes.

1. *General.*—Information with regard to the collection of particulars and methods of tabulation of industrial disputes involving stoppage of work has appeared in previous issues of the Year Book, and is also given in the Annual Reports of the Labour and Industrial Branch of this Bureau.

In *annual** tabulations, particulars are included of all disputes which either *commenced* or were *current* during the year under review. As regards “number of disputes,” and “number of establishments involved,” therefore, duplication will take place in respect of those disputes which started in and were uncompleted at the end of a preceding year; the number involved will, however, be indicated in a footnote, to permit of due allowance being made therefor in any calculations made from the tables.

2. *Industrial Disputes Involving Stoppage of Work, Classified in Industrial Groups, 1924.*—The following tables give particulars of industrial disputes which either commenced or were current during the year 1924, classified according to industrial groups. Similar information for the years 1913 to 1923 was published in Labour Reports Nos. 5 to 14.

INDUSTRIAL DISPUTES CLASSIFIED ACCORDING TO INDUSTRIAL GROUPS, 1924.

Class.	Industrial Group.	No. of Disputes.	No. of Estab. Involved.	No. of Workpeople Involved.			No. of Working Days Lost.	Estimated Loss in Wages.
				Directly.	In-directly.	Total.		
NEW SOUTH WALES.								
I.	Wood, furniture, sawmills, timber works, etc.	1	1	35	630	665	5,320	2,845
II.	Engineering, metal works, etc.	4	4	1,638	326	1,964	19,198	12,050
III.	Food, drink, etc., manufacturing and distribution	1	150	500	..	500	21,000	20,000
V.	Books, printing, bookbinding, etc.	1	2	26	..	26	26	30
VI.	Other manufacturing	1	1	18	..	18	4,030	3,027
VII.	Building	1	1	28	..	28	364	324
VIII.	Mines, quarries, etc.	395	407	112,301	16,362	128,663	632,306	698,944
IX.	Railway and tramway services	1	1	23	..	23	23	18
XI.	Shipping, wharf labour, etc.	6	12	1,117	318	1,435	22,184	16,252
XII.	Pastoral, agricultural, etc.	1	1	51	..	51	459	250
XIV.	Miscellaneous	4	4	350	12	362	1,886	1,402
Total		(a) 416	584	116,087	17,648	133,735	706,796	755,142
VICTORIA.								
II.	Engineering, metal works, etc.	4	4	624	184	808	2,682	1,869
III.	Food, drink, etc.	1	7	28	..	28	448	360
VI.	Other manufacturing	4	4	142	11	153	991	751
VII.	Building	5	5	793	145	938	7,541	5,262
VIII.	Mines, quarries, etc.	6	6	4,275	..	4,275	10,791	12,825
IX.	Railway and tramway services	2	2	2,684	..	2,684	37,485	24,565
XI.	Shipping, wharf labour, etc.	2	2	176	..	176	326	263
XII.	Pastoral, agricultural, etc.	2	2	357	50	407	1,099	770
XIV.	Miscellaneous	4	4	542	26	568	5,204	4,070
Total		(a) 30	36	9,621	416	10,037	66,567	50,735

(a) Six disputes in New South Wales (involving 6 establishments and 633 workers), one dispute in Victoria (1 establishment and 27 workers), one dispute in Queensland (1 establishment and 125 workers), one dispute in Tasmania (1 establishment and 88 workers), commenced in 1923.

* In respect of years prior to 1922, the figures include complete particulars of industrial disputes which commenced during any calendar year; and where any such dispute extended into a subsequent year, the relative figures were also incorporated in those for the year in which the dispute commenced.

INDUSTRIAL DISPUTES CLASSIFIED ACCORDING TO INDUSTRIAL GROUPS,
1924—continued.

Class.	Industrial Group.	No of Disputes.	No. of Estab. In-volved.	No. of Workpeople Involved.			No. of Working Days Lost.	Estimated Loss in Wages.
				Directly.	In-directly.	Total.		
QUEENSLAND.								
II.	Engineering, metal works, etc.	1	1	13	..	13	188	160
III.	Food, drink, etc.	2	2	180	88	268	5,428	4,484
VII.	Building ..	3	3	506	..	506	2,830	2,025
VIII.	Mines, quarries, etc.	7	7	663	88	751	11,141	14,180
IX.	Railway and tramway services	3	3	459	..	459	17,702	14,450
XI.	Shipping, wharf labour, etc.	1	6	132	..	132	132	215
XIII.	Domestic, hotels, etc.	1	1	7	..	7	35	16
XIV.	Miscellaneous ..	7	7	929	70	999	9,758	6,488
	Total ..	(a) 25	30	2,889	246	3,135	47,214	42,018
SOUTH AUSTRALIA.								
II.	Engineering, metal works, etc.	1	1	24	23	47	363	330
VII.	Building ..	4	33	763	..	763	12,681	9,638
IX.	Railway and tramway services	2	2	195	..	195	450	360
X.	Other land transport	1	2	80	12	92	92	70
XI.	Shipping, wharf labour, etc.	3	4	87	53	140	2,285	1,790
XII.	Pastoral, agricultural, etc.	1	1	27	33	60	600	629
XIV.	Miscellaneous ..	2	9	370	26	396	2,988	2,034
	Total ..	14	52	1,546	147	1,693	19,459	14,851
WESTERN AUSTRALIA.								
I.	Wood, sawmills, timber, etc.	3	11	372	1,200	1,572	26,299	13,072
III.	Food, drink, etc.	1	1	236	..	236	4,484	3,363
V.	Books, printing, etc.	1	27	214	..	214	12,840	9,495
VI.	Other manufacturing	2	5	186	66	252	9,543	6,265
VII.	Building ..	2	110	518	..	518	4,788	4,110
XI.	Shipping, wharf labour, etc.	2	8	195	100	295	4,800	3,840
XIV.	Miscellaneous ..	2	71	410	..	410	3,980	2,184
	Total ..	13	233	2,131	1,366	3,497	66,734	42,329
TASMANIA.								
I.	Wood, saw mills, timber, etc.	2	2	65	51	116	3,492	2,560
II.	Engineering, metal works, etc.	1	1	19	..	19	95	85
VIII.	Mines, quarries, etc.	2	2	184	3	187	8,019	9,623
	Total ..	(a) 5	5	268	54	322	11,606	12,268
NORTHERN TERRITORY.								
XIV.	Miscellaneous ..	1	1	27	..	27	270	356
	Total ..	1	1	27	..	27	270	356
ALL STATES.								
I.	Wood, sawmills, timber, etc.	6	14	472	1,881	2,353	35,111	18,477
II.	Engineering, metal works, etc.	11	11	2,318	533	2,851	22,526	14,494
III.	Food, drink, etc., manufacturing and distribution ..	5	160	944	88	1,032	31,360	28,207
V.	Books, printing, etc.	2	29	240	..	240	12,866	9,525
VI.	Other manufacturing	7	10	346	77	423	14,564	10,043
VII.	Building ..	15	152	2,608	145	2,753	28,204	21,359
VIII.	Mines, quarries, etc.	410	422	117,423	16,453	133,876	662,257	735,572
IX.	Railway and tramway services	7	6	3,306	..	3,306	55,660	39,393
X.	Other land transport	1	2	80	12	92	92	70
XI.	Shipping, wharf labour, etc.	15	34	1,762	471	2,233	29,727	22,360
XII.	Pastoral, agricultural, etc.	4	4	435	83	518	2,158	1,649
XIII.	Domestic, hotels, etc.	1	1	7	..	7	35	16
XIV.	Miscellaneous ..	20	96	2,628	134	2,762	24,086	16,534
	Total for Australia ..	(a) 504	941	132,569	19,877	152,446	918,646	917,699

(a) See footnote (a), page 584.

3. Industrial Disputes;* Australia, 1920 to 1924.—The following table gives particulars of the number of industrial disputes, the number of workpeople involved, and the losses in working days and wages caused by disputes which either commenced or were current during each calendar year 1920 to 1924, classified according to industrial groups:—

INDUSTRIAL DISPUTES—AUSTRALIA, 1920 TO 1924.(a)

Calendar Year.	Manu- facturing. (Groups I. to VI.)	Building. (Group VII.)	Mining. (Group VIII.)	Transport, Land and Sea. (Groups IX. to XI.)	Miscel- laneous. (Groups XII. to XIV.)	ALL GROUPS.
NUMBER OF DISPUTES.						
1920..	89	17	316	75	57	554
1921..	30	9	509	46	30	624
1922..	69	4	307	45	20	445
1923..	44	8	171	28	23	274
1924..	31	15	410	23	25	(a) 504
1920 to 1924 ..	263	53	1,713	217	155	2,401

NUMBER OF WORKPEOPLE INVOLVED.

1920..	21,092	6,527	81,043	15,043	31,861	155,566
1921..	3,161	1,421	133,547	22,694	4,278	165,101
1922..	15,215	287	96,151	2,882	1,797	116,332
1923..	9,884	577	58,043	2,257	5,560	76,321
1924..	6,899	2,753	133,876	5,631	3,287	152,446
1920 to 1924 ..	56,251	11,565	502,660	48,507	46,783	665,766

NUMBER OF WORKING DAYS LOST.

1920..	367,296	103,373	1,944,038	626,826	545,734	3,587,267
1921..	47,385	36,406	467,867	666,517	68,010	1,286,185
1922..	366,134	3,720	383,414	85,693	19,724	858,685
1923..	153,053	6,886	907,767	32,609	45,662	1,145,977
1924..	116,427	28,204	662,257	85,479	26,279	918,646
1920 to 1924 ..	1,050,295	178,589	4,365,343	1,497,124	705,409	7,706,760

ESTIMATED LOSS IN WAGES.

1920..	£ 215,057	£ 70,006	£ 1,418,193	£ 357,786	£ 309,345	£ 2,370,387
1921..	39,416	24,719	459,450	397,169	49,721	970,475
1922..	242,159	3,280	427,363	64,597	14,108	761,507
1923..	120,127	6,284	1,086,901	29,580	32,611	1,275,906
1924..	80,746	21,359	735,572	61,823	18,199	917,699
1920 to 1924 ..	697,505	125,648	4,127,482	910,955	423,084	6,285,574

(a) See footnote (a), page 584.

4. Summary of Disputes (involving Stoppage of Work), 1920 to 1924 (a).—The following table gives particulars of the number of industrial disputes in each State in various years from 1920 to 1924, together with the number of workpeople involved, the number of working days lost, and the total estimated loss in wages.

(*) This table shows the full effect of all disputes which either occurred or were current during each calendar year, and the footnote * on page 584 does not, therefore, apply.

INDUSTRIAL DISPUTES—SUMMARY, 1920 TO 1924.(a)

State or Territory.	Year.	No. of Disputes.	Establishments Involved in Disputes.	No. of Workpeople Involved.			No. of Working Days Lost.	Total Estimated Loss in Wages.
				Directly.	In-directly.	Total.		
New South Wales ..	1920	349	650	68,033	22,349	90,382	587,156	£ 432,988
	1921	535	567	108,573	29,921	138,494	547,838	493,267
	1922	342	657	88,257	14,042	102,299	586,520	579,491
	1923	200	601	54,809	5,390	60,199	892,306	1,038,519
	1924	(b) 416	584	116,087	17,648	133,735	706,796	755,142
Victoria ..	1920	53	809	15,274	24,534	39,808	783,286	465,244
	1921	20	118	4,119	2,161	6,280	109,595	69,629
	1922	29	412	5,819	311	6,130	84,701	47,695
	1923	29	133	6,279	771	7,050	98,880	108,512
	1924	(b) 30	36	9,621	416	10,037	66,567	50,735
Queensland ..	1920	55	71	3,775	2,033	5,808	68,298	44,943
	1921	33	97	3,367	1,512	4,879	95,560	69,793
	1922	38	49	2,611	620	3,231	36,730	32,589
	1923	25	36	2,724	340	3,064	55,131	53,981
	1924	(b) 25	30	2,889	246	3,135	47,214	42,018
South Australia ..	1920	40	126	4,732	1,067	5,799	232,402	140,326
	1921	19	45	2,158	1,002	3,160	57,038	37,315
	1922	19	229	2,294	929	3,223	114,334	43,222
	1923	10	23	806	975	1,781	25,971	20,440
	1924	14	52	1,546	147	1,693	19,459	14,851
Western Australia ..	1920	45	434	9,095	2,918	12,013	146,640	108,055
	1921	12	56	1,906	10,157	12,063	145,103	86,038
	1922	8	91	643	163	806	43,472	38,208
	1923	6	88	1,255	2,752	4,007	72,274	53,408
	1924	13	233	2,131	1,366	3,497	66,734	42,329
Tasmania ..	1920	12	14	1,610	146	1,756	54,283	32,160
	1921	5	5	75	150	225	1,483	986
	1922	5	5	382	4	386	9,284	7,497
	1923	3	3	197	..	197	1,093	1,296
	1924	(b) 5	5	268	54	322	11,606	12,268
Fed. Cap. Territory	1922	2	2	217	..	217	2,604	2,035
	1923	1	1	23	..	23	322	250
Northern Territory	1920	..	..	..	..	..	..	..
	1922	2	2	40	..	40	1,040	770
	1923	..	..	..	..	..	..	..
Australia ..	1920	554	2,104	102,519	53,047	155,566	1,872,065	1,223,716
	1921	624	888	120,198	44,903	165,101	956,617	757,028
	1922	445	1,447	100,263	16,069	116,332	858,685	751,507
	1923	274	885	66,093	10,228	76,321	1,145,977	1,275,506
	1924	(b) 504	941	132,569	19,877	152,446	918,646	917,699

(a) See footnote *, page 584.

(b) See footnote (a), page 584.

Detailed information in regard to the disputes during these and previous years is given in the Labour Reports issued by this Bureau.

The number of disputes in 1924 was almost double that in 1923, the stoppages in the coal-mining industry chiefly accounting for the increase. The principal dispute in 1924 was that in which the coke workers in New South Wales were concerned, the trouble being due to a demand by the employees for a reduction of the working week by five hours. The dispute lasted 97 days and involved the workers in a loss of 126,100 working days and £96,750 in wages. Of the disputes in the coal-mining industry in New South Wales,

the more important were those which occurred at the Wallsend Colliery (yardage rates); Stockton Borehole, Boolaroo (increase in wages); Bellbird Colliery, Cessnock (hours); Mount Kembla Colliery (working conditions); Wallarah Colliery, Catherine Hill Bay (dismissal); and Richmond Main (seniority). The only other disputes of note were those in connexion with the bakers, Sydney, over the question of day-baking; the seamen on the *Katoomba*, *Karoola*, and *Komura*, Sydney, the object of which was to enforce payment of compensation for an injury to a fireman; the employees of the electric tramways, Melbourne, over the dismissal of an employee; and the construction workers, Ingham railway, Queensland, for the reinstatement of seven men and the removal of an engineer.

A dispute which threatened to reach very serious dimensions occurred on the waterfront in October, 1924, and was known as the "Overtime" Dispute. Owing to the difficulties of obtaining even an approximate estimate of losses involved, coupled with the fact that there was no actual stoppage, the dispute was not included in the foregoing tabulations.

The objective of the Waterside Workers was to secure the abolition of the Overseas Shipping Bureau in Sydney, which since its formation as the result of the 1917 ("Railway") dispute had employed and paid its labour on a basis not in consonance with the principles recognized by the Waterside Workers' Federation. The initial action taken by the Federation was to prohibit the working of "overtime" on all vessels after 5 p.m., but subsequently all vessels loaded through the Bureau were declared "black," and cargo operations thus rendered almost impossible.

The Commonwealth Court of Conciliation and Arbitration which intervened in the dispute declared its inability to abolish the Bureau, but as the result of a conference of the parties called by the Commonwealth Government, the owners finally decided to abolish the Bureau as from the 28th February, 1925, and the dispute accordingly ended on the 15th December, 1924. The losses incurred by the workers were mostly in "overtime" payments, but no satisfactory estimate of the total is obtainable.

It is, of course, obvious that the mere number of disputes cannot by itself be accepted as a proper basis of comparison, nor does the number of workpeople afford a satisfactory basis. A better idea as to the significance and effect of industrial disputes may be obtained from the number of working days lost and the estimated loss in wages.

The position which New South Wales occupies in comparison with the other States is almost entirely due to the prevalence of disputes in connexion with coal-mining, and attention has frequently been drawn to the preponderating influence exercised by these disputes on the total number of industrial disputes. In making any comparison as to the number of disputes in this industrial class in each State, it should be observed that the number of workers engaged in the mining industry is very much larger in New South Wales than in any of the other States.

Apart from these stoppages, the number of disputes in all other industries, whilst still in excess of that for each of the other States, does not compare unfavourably if the number of workpeople in each State is taken into consideration.

In regard to extensive dislocations of industry prior to the institution of systematic inquiries by this Bureau, efforts were made to obtain statistical data relating to the shearers' disputes in 1890, 1891, and 1894, and the maritime dispute in the early part of 1891, but precise information was not obtainable.

5. **Duration of Industrial Disputes, 1924.**—The following table gives particulars respecting the number of disputes, workpeople directly and indirectly involved, working days lost, and estimated amount of loss in wages respectively, consequent on the cessations of work recorded for Australia during the year 1924, classified under the adopted limits of duration :—

INDUSTRIAL DISPUTES—DURATION, AUSTRALIA, 1924.(a)

Limits of Duration.	No. of Disputes.	No. of Workpeople Involved.			Number of Working Days Lost.	Total Estimated Loss in Wages.
		Directly.	Indirectly.	Total.		
1 day and less ..	216	61,542	9,230	70,772	70,679	£ 35,328
2 days and more than 1 day ..	71	23,023	2,301	25,324	49,618	56,746
3 days and more than 2 days ..	42	11,563	862	12,425	36,795	43,230
Over 3 days and less than 1 week (6 days) ..	45	7,567	2,003	9,570	40,255	46,245
1 week and less than 2 weeks ..	55	13,322	1,443	14,765	110,882	109,118
2 weeks and less than 4 weeks ..	31	9,958	1,917	11,875	186,462	170,419
4 weeks and less than 8 weeks ..	26	3,395	803	4,198	158,941	163,775
8 weeks and over ..	18	2,190	1,318	3,517	265,014	242,838
Total ..	504	132,569	19,877	152,446	918,646	917,699

(a) See footnote (a), page 584.

Similar figures for the years 1913 to 1923 will be found in previous issues of the Year Book and in the Labour Reports.

6. Causes of Industrial Disputes, 1914 to 1924 (a).—The following table shows the number of disputes, number of workpeople involved, and the total number of working days lost in disputes during the years 1914 and 1919 to 1924, classified according to principal cause:—

INDUSTRIAL DISPUTES.—CAUSES, AUSTRALIA, 1914 TO 1924.(b)

Causes of Disputes.	1914.	1919.	1920.	1921.	1922.	1923.	1924(b).
NUMBER OF DISPUTES.							
1. Wages—							
(a) For increase ..	50	99	94	19	15	35	44
(b) Against decrease ..	3	2		2	18	4	7
(c) Other wage questions ..	67	100	106	161	83	37	95
2. Hours of Labour—							
(a) For reduction ..	1	4	16	12	12	10	2
(b) Other disputes re hours ..	13	5	9	16	2	2	4
3. Trades Unionism—							
(a) Against employment of non-unionists ..	13	19	20	5	6	4	6
(b) Other union questions ..	11	29	27	22	15	11	31
4. Employment of particular Classes or Persons ..	83	118	135	169	155	68	137
5. Working Conditions ..	72	54	106	162	89	174	111
6. Sympathetic ..	3	6	2	13	8	9	8
7. Other Causes ..	21	24	39	43	42	37	59
Total ..	337	460	554	624	445	274	504(b)
NUMBER OF WORKPEOPLE INVOLVED.							
1. Wages—							
(a) For increase ..	7,362	58,532	41,748	2,659	843	9,816	8,312
(b) Against decrease ..	534	667		850	4,432	174	1,113
(c) Other wage questions ..	15,243	26,222	21,139	52,704	24,459	8,096	30,585
2. Hours of Labour—							
(a) For reduction ..	220	578	20,758	2,313	5,935	6,488	1,328
(b) Other disputes re hours ..	3,237	961	2,137	2,113	124	485	1,172
3. Trades Unionism—							
(a) Against employment of non-unionists ..	5,807	9,001	2,752	1,353	1,072	473	1,005
(b) Other union questions ..	1,593	17,509	7,534	6,607	4,264	2,310	12,078
4. Employment of particular Classes or Persons ..	14,863	21,488	26,163	45,408	36,194	11,269	39,839
5. Working Conditions ..	17,053	11,582	21,204	35,790	27,334	15,605	36,630
6. Sympathetic ..	675	3,080	1,397	3,251	1,119	875	436
7. Other Causes ..	4,462	7,971	10,734	12,053	10,556	20,130	19,948
Total ..	71,049	157,591	155,566	165,101	116,332	76,321	152,446

(a) See footnote *, page 584.

(b) See footnote (a), page 584.

INDUSTRIAL DISPUTES.—CAUSES, AUSTRALIA 1914 TO 1924—*continued.*

Causes of Disputes.	1914.	1919.	1920.	1921.	1922.	1923.	1924.
NUMBER OF WORKING DAYS LOST.							
1. Wages—							
(a) For increase ..	99,451	5,403,581	793,935	13,731	8,694	64,493	120,317
(b) Against decrease ..	32,965	10,013	..	25,700	154,791	1,012	13,553
(c) Other wage questions	169,847	96,118	101,219	192,858	149,129	81,749	111,613
2. Hours of Labour—							
(a) For reduction ..	9,240	10,372	534,458	13,315	164,794	101,807	130,440
(b) Other disputes <i>re</i> hours	10,855	15,760	37,486	13,260	1,701	36,092	42,441
3. Trades Unionism—							
(a) Against employment of non-unionists ..	92,720	279,804	24,900	17,890	5,485	784	2,555
(b) Other union questions	6,968	329,205	21,999	117,199	18,976	17,743	40,046
4. Employment of particular Classes or Persons ..	64,367	87,225	129,215	431,130	198,256	63,094	253,779
5. Working Conditions ..	584,289	32,029	128,967	69,732	123,665	134,830	124,041
6. Sympathetic ..	2,125	21,050	72,940	6,150	9,438	6,357	926
7. Other Causes ..	11,568	23,069	26,946	55,652	23,756	638,016	78,925
Total ..	1,090,395	6,308,226	1,872,065	956,617	858,685	1,145,977	918,646

The main causes of industrial disputes are "Wage" questions, "Working Conditions," and "Employment of Particular Classes or Persons." In each of the ten years, 1914 to 1924, with the exception of 1922, the number of dislocations concerning wages exceeded those caused by any other question, and varied between a minimum proportion of 26 per cent. in 1922 and a maximum of 45 per cent. in 1916. The majority of the disputes classified under the heading, "Employment of Particular Classes or Persons," are stoppages of work for the purpose of protesting against the dismissal of certain employees, who, in the opinion of their fellow-workers, have been unfairly treated or victimized. This class of dispute occurs very frequently in the coal-mining industry. The number of disputes over "Trade Union" questions has represented a fairly uniform proportion of the total number of disputes during the years under review, while the figures under "Hours of Labour" show a steady decrease. "Sympathetic" disputes represent only a small proportion of the total disputes, varying over the years shown from one-quarter to three per cent.

7. Results of Industrial Disputes.—The following table shows the number of disputes, number of workpeople involved, and the number of working days lost in disputes throughout Australia during the five years 1920 to 1924, classified according to results :—

INDUSTRIAL DISPUTES CLASSIFIED ACCORDING TO RESULTS.—AUSTRALIA, 1920 TO 1924.(a)

Year.	No. of Disputes.				Number of Workpeople Involved in Disputes.				Total Number of Working Days Lost by Disputes.			
	In Favour of Workpeople.	In Favour of Employer.	Compromise.	Indefinite.	In Favour of Workpeople.	In Favour of Employer.	Compromise.	Indefinite.	In Favour of Workpeople.	In Favour of Employer.	Compromise.	Indefinite.
1920 ..	183	199	168	4	30,399	61,947	62,811	409	180,345	911,156	777,175	3,389
1921 ..	126	274	216	8	25,244	63,380	73,887	2,590	76,381	162,331	714,501	3,404
1922 ..	81	268	82	2	18,050	77,785	16,366	81	175,379	383,342	132,615	738
1923 ..	77	156	24	8	12,951	54,026	5,787	1,784	65,625	917,162	132,135	2,392
1924 a b	146	261	48	45	32,762	89,709	13,843	15,432	153,533	416,174	291,039	20,445

(a) See footnote (a), page 584.

(b) The following particulars of disputes which were incomplete at the 31st December, 1924, should be added to the above figures to effect a balance with those published in the preceding table :—

State.	No. of Disputes.	No. of Establishments.	Workpeople Involved.	Working Days Lost.	Wages Lost.
New South Wales ..	4	4	700	28,455	£ 32,535

8. *Methods of Settlement.*—The following tables show for Australia the number of disputes, number of workpeople involved, and number of working days lost in industrial disputes during the years 1914 and 1919 to 1924, classified according to the adopted schedule of methods of settlement :—

INDUSTRIAL DISPUTES.—METHODS OF SETTLEMENT, AUSTRALIA, 1914 TO 1924.(a)

Methods of Settlement.	1914.	1919.	1920.	1921.	1922.	1923.	1924.(b)
NUMBER OF DISPUTES.							
Negotiations—							
Direct between employers and employees or their representatives	247	291	380	412	249	140	264
By intervention or assistance of distinctive third party—not under Commonwealth or State Industrial Act	11	35	25	65	52	25	20
Under State Industrial Acts—							
By intervention, assistance, or compulsory conference	7	33	33	18	7	4	11
By reference to Board or Court	17	5	8	4	7	2	7
Under Commonwealth Conciliation and Arbitration Act—							
By intervention, assistance, or compulsory conference	5	9	8	11	5	2	12
By Filling Places of Workpeople on Strike or Locked Out	16	22	22	10	11	5	5
By Closing-down Establishment Permanently	4	7	4	2	6	1	2
By Other Methods	30	58	74	102	98	86	179
Total	337	460	554	624	433	265	(c)500

NUMBER OF WORKPEOPLE INVOLVED.

Negotiations—							
Direct between employers and employees or their representatives	48,204	76,070	101,404	93,912	62,000	30,213	70,895
By intervention or assistance of distinctive third party—not under Commonwealth or State Industrial Act	8,054	47,849	6,278	20,775	15,554	10,277	4,448
Under State Industrial Acts—							
By intervention, assistance, or compulsory conference	770	6,926	9,312	11,229	1,222	615	2,519
By reference to Board or Court	7,308	1,380	1,711	1,083	1,128	544	2,952
Under Commonwealth Conciliation and Arbitration Act—							
By intervention, assistance, or compulsory conference	205	1,997	766	12,037	446	58	4,262
By Filling Places of Workpeople on Strike or Locked Out	629	2,202	2,141	334	790	315	130
By Closing-down Establishment Permanently	86	401	182	53	171	18	170
By Other Methods	5,793	20,766	33,772	25,678	30,971	33,408	66,370
Total	71,049	157,591	155,566	165,101	112,282	75,448	151,746

NUMBER OF WORKING DAYS LOST.

Negotiations—							
Direct between employers and employees or their representatives	803,799	632,269	827,985	245,765	353,336	229,503	373,155
By intervention or assistance of distinctive third party—not under Commonwealth or State Industrial Act	128,231	5,379,655	217,916	156,076	187,164	582,929	103,005
Under State Industrial Acts—							
By intervention, assistance, or compulsory conference	4,256	94,557	69,436	136,735	16,016	25,531	41,900
By reference to Board or Court	120,685	8,460	19,236	22,752	13,767	8,484	142,939
Under Commonwealth Conciliation and Arbitration Act—							
By intervention, assistance, or compulsory conference	1,421	74,018	34,205	327,048	8,081	473	74,376
By Filling Places of Workpeople on Strike or Locked Out	4,402	46,029	160,562	3,542	11,759	2,517	3,040
By Closing-down Establishment Permanently	3,646	5,737	12,919	538	603	18	1,250
By Other Methods	23,955	67,501	529,806	64,161	101,348	267,859	150,526
Total	1,090,395	6,308,226	1,872,065	956,617	692,074	1,117,314	880,191

(a) See footnote *, page 584. (b) See footnote (a), page 584. (c) See footnote (b), page 587.

INDUSTRIAL DISPUTES.—METHODS OF SETTLEMENT, AUSTRALIA.
1914 TO 1924 (a)—*continued*.

Methods of Settlement.	1914.	1919.	1920.	1921.	1922.	1923.	1924.(b)
ESTIMATED LOSS IN WAGES.							
	£	£	£	£	£	£	£
Negotiation—							
Direct between employers and employees or their representatives ..	402,729	419,573	534,760	240,442	283,515	252,059	398,623
By intervention or assistance of distinctive third party — not under Commonwealth or State Industrial Act ..	66,225	3,342,611	154,093	146,929	200,835	676,288	114,830
Under State Industrial Act—							
By intervention, assistance or compulsory conference..	1,841	59,167	46,831	79,233	14,663	24,158	34,151
By reference to Board or Court ..	64,208	4,425	11,205	19,452	10,541	7,536	110,559
Under Commonwealth Conciliation and Arbitration Act—							
By intervention, assistance or compulsory conference..	712	46,472	19,285	198,887	5,701	350	56,766
By Filling Places of Work-people on Strike or Locked Out ..	2,076	29,586	94,235	2,203	8,670	1,737	2,111
By Closing down Establishment Permanently ..	1,651	3,106	7,125	355	635	13	970
By other methods ..	11,786	46,996	356,182	69,527	92,308	279,104	167,149
Total ..	551,228	3,951,936	1,223,716	757,028	616,868	1,241,245	885,164

(a) See footnote *, page 584.

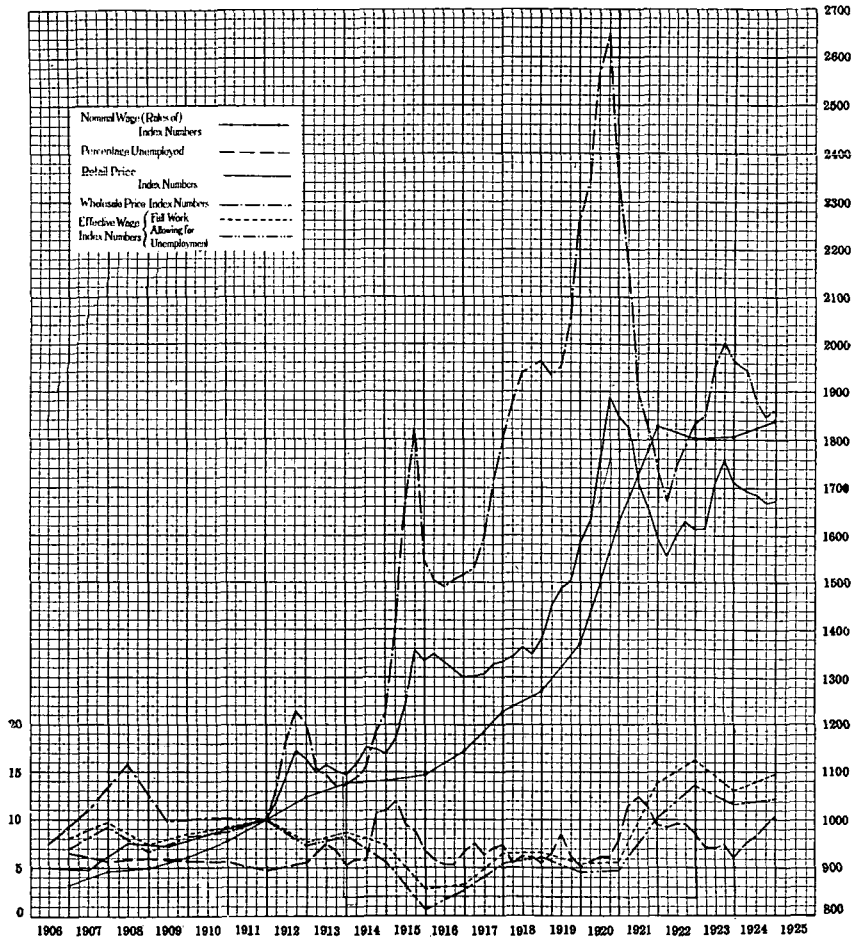
(b) See footnote (a), page 584.

The majority of the disputes were settled by direct negotiations between employers and employees, the proportion so settled ranging between 53 per cent. in 1917 and 76 per cent. in 1921; in 1924 the proportion was 57 per cent. The proportion of dislocations settled by compulsory conferences or the intervention and assistance of officials under State or Commonwealth Arbitration Acts has slightly decreased during the period under review. In connexion with the comparatively large number of disputes which are classified as having been settled "By other methods," many stoppages of work occur each year, principally at collieries, but the cause for such stoppages is not officially known to the employers or their representatives. Such stoppages usually last for one day, and work is resumed without negotiations for a settlement of the trouble.

§ 2. Fluctuations in Employment.

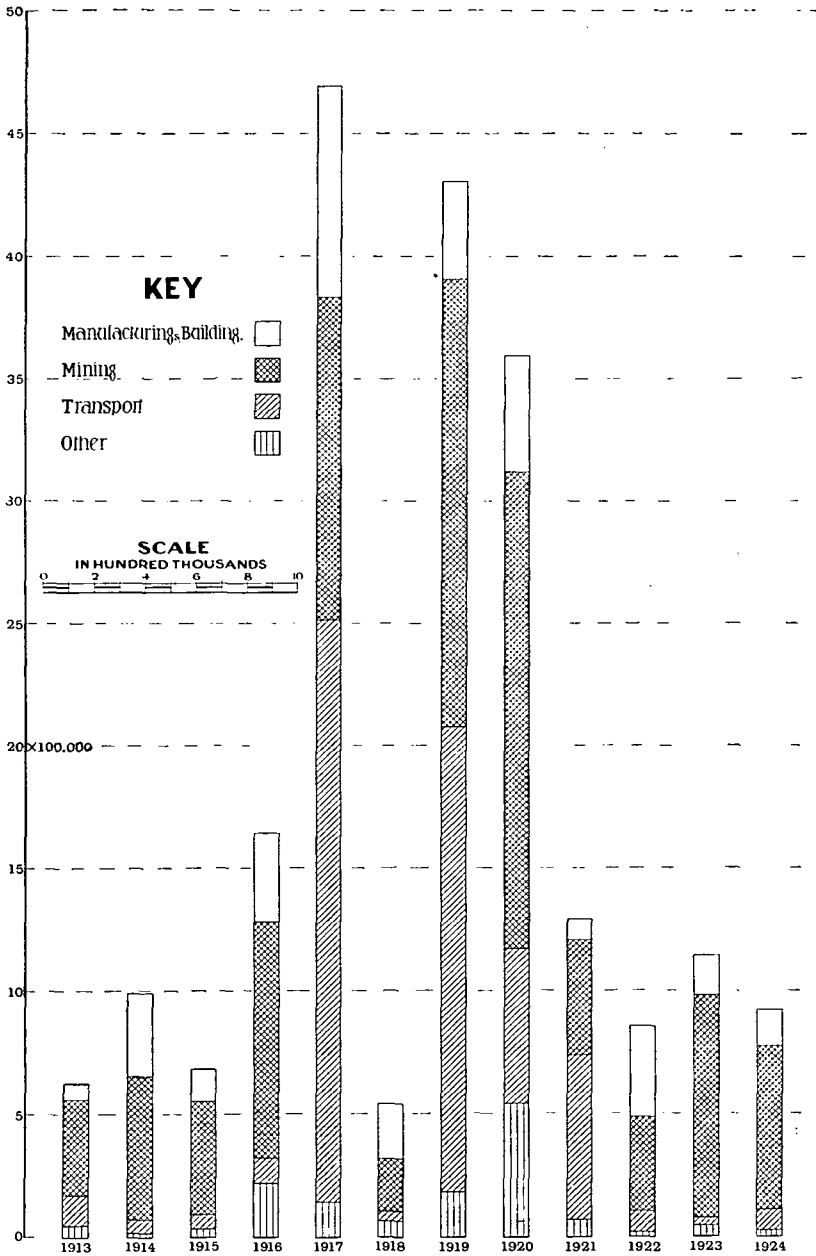
1. **General.**—The particulars given in the following tables are based upon information furnished by the secretaries of trade unions. The membership of the unions regularly reporting is approximately 400,000. Unemployment returns are not collected from unions the members of which are in permanent employment, such as railway and tramway employees, and public servants, or from unions whose members are casually employed (wharf labourers, etc.). Very few of the unions pay unemployment benefit, but the majority of the larger organizations have permanent secretaries and organizers who are closely in touch with the members and with the state of trade within their particular industries. In many cases unemployment registers are kept, and provision is made in the rules for payment of reduced subscriptions by members out of work. In view of these facts, and of the large membership of the unions from which quarterly returns are received,

RETAIL AND WHOLESALE PRICES, NOMINAL AND EFFECTIVE WAGE INDEX-NUMBERS,
AND PERCENTAGE OF UNEMPLOYED—AUSTRALIA, 1906 TO 1924.



NOTE.—The figures on the left represent the scale for the percentage unemployed according to trade union returns. The figures on the right represent the scale for the several index-numbers, the year 1911 being taken in each case as base (=1,000). Since the end of the year 1911, the Retail Price Index-numbers (weighted average cost of food, groceries, and housing for the six capital cities), and the Wholesale Price Index-number (Melbourne) are shown each quarter, while unemployment percentages are shown quarterly since the end of the year 1912 only. The other index-numbers since 1913 refer to the average for the whole year, but for purposes of convenience are plotted on the graph as at the end, not the middle, of the year. Retail Price and Wholesale Price Index-numbers show the average level during the whole of each quarter, and they also for convenience are plotted at the end, and not the middle, of each quarter.

INDUSTRIAL DISPUTES.—WORKING DAYS LOST IN INDUSTRIAL GROUPS,
AUSTRALIA, 1913 TO 1924.



EXPLANATION.—The scale refers to working days lost in hundred thousands. Thus, taking the year 1917, and comparing the shaded and blank sections with the scale, it will be observed that about 870,000 working days were lost in Manufacturing and Building, over 1,300,000 in Mining, over 2,300,000 in Transport, and about 150,000 in other industries.

percentage unemployment results based on the information supplied may be taken to show the general trend of unemployment. Seasonal fluctuations in unemployment have been provided for by collecting returns quarterly since the 1st January, 1913, the yearly figures quoted representing the average of the four quarters.

2. *Unemployment.*—(i) *States.* In addition to the qualifications referred to above, allowance must be made for the circumstance that the industries included in the returns from trade unions are not quite identical in the various States. The results may, however, be taken as representing fairly well labour conditions generally.

UNEMPLOYMENT.—STATES, 1924.

State.	Unions Reporting.		Unemployed.	
	Number.	Members.	Number.	Percentage.
New South Wales	112	164,273	20,749	12.6
Victoria	89	130,052	9,197	7.1
Queensland	49	36,393	2,343	6.4
South Australia	60	34,740	1,612	4.6
Western Australia	65	23,443	1,278	5.5
Tasmania	38	8,712	328	3.8
Australia	413	397,613	35,507	8.9

(ii) *Summary for Australia.* The following table gives a summary for Australia for the last five years:—

UNEMPLOYMENT.—AUSTRALIA, 1920 TO 1924.

Particulars.	Unions.	Membership.	Unemployed.	
			Number.	Percentage.
1920	447	341,967	22,105	6.5
1921	449	361,744	40,549	11.2
1922	445	380,945	35,219	9.2
1923	436	376,557	26,672	7.1
1924	413	397,613	35,507	8.9
1924 1st Quarter	423	388,960	29,417	7.6
2nd „	407	394,809	32,708	8.3
3rd „	412	403,960	38,482	9.5
4th „	408	402,722	41,420	10.3

NOTE.—Similar figures for each of the four quarters of the years since 1912 will be found in the Labour Reports. The quarterly figures show the number of persons who were out of work for three days or more during a specified week in each quarter, and the annual figures the average of the four quarters; they do not include persons out of work through strikes or lock-outs.

The highest percentage of unemployed yet recorded (12.5) was reached in the second quarter of 1921.

(iii) *Industrial Groups.* The next table shows the percentages unemployed in industrial groups. Industries in which employment is either unusually stable or exceptionally casual, such as railways, shipping, agricultural, pastoral, etc., and domestic, hotels, etc., are insufficiently represented in the returns owing to the impossibility of securing the necessary information from the trade unions. Particulars are not,

therefore, shown separately for these groups, such returns as are available being included in the last group, "Other and Miscellaneous."

UNEMPLOYMENT IN INDUSTRIAL GROUPS.—AUSTRALIA, 1924.

Industrial Group.	Number Reporting.		Unemployed.	
	Unions.	Members.	Number.	Percentage.
I. Wood, Furniture, etc. ..	18	23,134	1,076	4.7
II. Engineering, Metal Works, etc. ..	64	60,617	6,916	11.4
III. Food, Drink, Tobacco, etc. ..	55	43,884	5,045	11.5
IV. Clothing, Hats, Boots, etc. ..	22	38,584	2,911	7.5
V. Books, Printing, etc. ..	13	15,751	270	1.7
VI. Other Manufacturing ..	70	35,380	4,766	13.5
VII. Building ..	47	45,815	2,213	4.8
VIII. Mining, Quarrying, etc. ..	22	29,636	3,262	11.0
X. Land Transport other than Rail- way and Tramway services ..	11	11,439	841	7.1
IX., XI., XII., XIII., and XIV., Other and Miscellaneous ..	91	93,373	8,207	8.8
All Groups ..	413	397,613	35,507	8.9

§ 3. Apprenticeship.

In *Year-Book* No. 16, pp. 602-3, information was given with regard to legislation relating to the question of apprenticeship. Tables were included showing the periods of apprenticeship fixed in the awards of the various industrial tribunals of the States and Commonwealth, and also the proportion of apprentices to journeymen and journeywomen. This information has been omitted from the present issue, but further investigations are being made, and additional and more comprehensive information will be incorporated in a later issue.

D. ASSOCIATIONS.

§ 1. Labour Organizations.

1. **Registration.**—(i) *Under Trade Union Acts.* The benefits obtained by registering trade unions under the Trade Union Acts in force in the various States are not considered of much value; consequently the statistics of registered trade unions of employees do not accurately represent the position of unionism. Further, the returns for past years are so defective as to be practically valueless, inasmuch as no reliable indication is afforded of the numerical and financial position of the unions. Some of the registered unions fail to supply returns; this non-supply may lead to cancellation of the registration. Others have obtained the cancellation of their certificates of registration, the apparent reason being that they proposed to register under the Commonwealth Conciliation and Arbitration Act or a State Arbitration Act. In Queensland, some of the largest labour unions withdrew from registration during 1911, mainly on account of the necessity for closer restriction of their objects as set forth in their rules, consequent on legal decisions affecting trade unions. In Victoria and in South Australia very few of the existing unions are registered under the Trade Union Acts. It will be seen, therefore, that the available information under this heading is too meagre for statistical purposes.

(ii) *Under Industrial Arbitration Acts.*—Information with regard to registrations of trade unions under the various State Industrial Arbitration Acts will be found in previous issues of the *Year Book*. The latest information available as to registrations

is as follows:—New South Wales, 119 industrial unions of employers and 153 industrial unions of employees; Queensland, 76 industrial unions of employees with approximately 92,444 members; South Australia, 16 organizations of employees with 11,800 members; Western Australia, 43 organizations of employers with 900 members, and 125 organizations of employees with 34,084 members. Registration under Commonwealth legislation began in 1906. In that and the four following years, there was but one union of employers; another was registered in 1911. The unions of employees registered were 20 in 1906, with 41,413 members. In August, 1923, there were on the register 10 organizations of employers with 5,663 persons, firms or corporations affiliated, and 147 organizations of employees with 573,095 members.

2. Particulars regarding Trade Unions.—(i) *Types*. The trade unions in Australia are very diverse in character, and range from the small independent association to the large interstate organization, which, in its turn, may be merely a branch of a British or international union. Broadly speaking, there are four distinct classes of labour organizations, viz. :—(i) the local independent, (ii) the State, (iii) the interstate, and (iv) the Australasian or International, but a number of variations occur from each of these classes. The leading characteristics of each of these types were briefly outlined in Labour Report No. 2 (pp. 7 to 9) issued by this Bureau.

(ii) *Number and Membership*. As already stated, the figures for trade unions registered under the Acts do not represent the position of unionism in Australia. In 1912 the Labour and Industrial Branch of the Commonwealth Bureau of Census and Statistics was established, and with the cordial co-operation of the officials of the labour organizations, comprehensive figures relating to the development of organized labour are now available. The following table shows the position at the end of 1924 :—

TRADE UNIONS, BRANCHES, AND MEMBERS, 1924.

State or Territory.	Number of Separate Unions.	Number of Branches.	Number of Members.
New South Wales	202	726	274,831
Victoria	158	386	217,044
Queensland	117	271	112,238
South Australia	109	84	65,812
Western Australia	117	149	43,270
Tasmania	84	60	15,516
Northern Territory	4	..	444
Total	791	1,676	729,155
Australia(a)	376(a)	2,091(b)	729,155

(a) Allowing for interstate duplication. (b) Number of distinct organizations and interstate groups of organizations in Australia—not the total number of organizations, which are practically independent and self-governing. (See below.)

In the preceding table the number of separate unions in each State refers to the number of unions which are represented in each State, exclusive of branches therein, and each union is counted once only. Except in the last line, the number of branches indicates the number of branches of State head offices, which may, of course, themselves be branches of an interstate or larger organization. In taking the total number of separate unions in Australia (see last line but one), it is obvious that, in the case of interstate and similar unions, there will be duplication, since each such union is counted once in each State in which it has any branches. In the figures given in the last line allowance has been made for this duplication. State branches of interstate or federated unions, as well as sub-branches within a State, are included under the heading "Branches" in the third column—last line. The scheme of organization of these interstate or federated unions varies greatly in character, and the number of separate Commonwealth unions does not, therefore, fairly represent the number of practically independent organizations in Australia. In some of these unions the State organizations are bound together under a system of unification and centralized control, while in others the State units are practically independent and self-governing, the federal bond being loose and existing only for one or two specified purposes. There are therefore 376 distinct organizations and interstate groups of organizations in Australia, having 2,091 State branches and sub-branches, and a total of 729,155 members.

(iii) *Classification in Industrial Groups.* The following table shows the number of unions and members thereof in Australia at the end of each of the last five years. The number of unions specified refers to the number of different unions represented in each State; and, while interstate or federated unions are counted once in each State in which they are represented, sub-branches within a State are not counted.

TRADE UNIONS.—INDUSTRIAL GROUPS, AUSTRALIA, 1920 TO 1924.

Industrial Groups.	1920.	1921.	1922.	1923.	1924.
NUMBER OF UNIONS.					
I. Wood, Furniture, etc.	19	19	19	18	18
II. Engineering, Metal Works, etc.	76	75	69	70	69
III. Food, Drink, Tobacco, etc.	71	66	68	64	65
IV. Clothing, Hats, Boots, etc.	26	25	25	24	24
V. Books, Printing, etc.	26	18	17	14	14
VI. Other Manufacturing	84	85	84	79	78
VII. Building	56	57	54	52	51
VIII. Mining, Quarrying, etc.	18	19	19	16	16
IX. Railway and Tramway Services	43	49	52	51	51
X. Other Land Transport	22	20	20	14	13
XI. Shipping, etc.	69	70	74	94	91
XII. Pastoral, Agricultural, etc.	9	9	10	8	8
XIII. Domestic, Hotels, etc.	23	24	26	26	23
XIV. Miscellaneous	254	260	276	267	270
Total	796	796	813	797	791

NUMBER OF MEMBERS.

I. Wood, Furniture, etc.	23,691	25,541	23,582	24,465	23,859
II. Engineering, Metal Works, etc.	53,870	57,012	53,637	59,032	68,243
III. Food, Drink, Tobacco, etc.	49,447	51,698	54,497	58,663	55,402
IV. Clothing, Hats, Boots, etc.	40,325	42,069	44,540	45,842	46,521
V. Books, Printing, etc.	15,136	15,059	15,341	16,249	15,856
VI. Other Manufacturing	39,710	38,873	37,942	38,554	40,376
VII. Building	40,348	42,244	42,177	46,231	51,819
VIII. Mining, Quarrying, etc.	41,777	39,967	38,082	37,063	40,996
IX. Railway and Tramway Services	89,069	88,731	92,152	89,405	90,365
X. Other Land Transport	17,822	16,944	20,376	16,389	17,785
XI. Shipping, etc.	41,668	40,840	41,510	38,006	37,823
XII. Pastoral, Agricultural, etc.	42,923	47,893	43,538	36,584	46,081
XIII. Domestic, Hotels, etc.	19,353	20,442	21,130	20,713	22,861
XIV. Miscellaneous	169,271	175,696	174,434	172,550	171,168
Total	684,450	703,009	702,938	699,743	729,155

Particulars are given in Labour Report No. 15 of the number of male and female members of unions and the percentage of such members on the total number of adult wage-earners. Other tables in the same Report show the classification of unions according to the number of members and the number of central labour organizations.

(iv) *Interstate or Federated Unions.* The following table gives particulars as to the number and membership of interstate or federated unions in 1924 :—

INTERSTATE OR FEDERATED UNIONS.—AUSTRALIA, 1924.

Particulars.	Unions Operating in—					Total.
	2 States.	3 States.	4 States.	5 States.	6 States. (a)	
Number of Unions	19	13	13	21	39	105
Number of Members	21,831	35,037	77,665	148,834	294,681	578,048

(a) Certain unions in this group have, in addition to branches in each of the six States, a branch in the Northern Territory.

It appears, therefore, that 105 out of the 376 separate associations and groups of associations in Australia are organized on an interstate basis. The membership of these 105 unions amounts to 578,048, or 79.3 per cent. of the total membership (729,155) of all unions.

3. Central Labour Organizations.—In each of the capital cities, and in a number of industrial centres elsewhere, delegate organizations, consisting of representatives from a group of trade unions, have been established. Their revenue is raised by means of a per capita tax on the members of each affiliated union. In most of the towns where such central organizations exist, the majority of the local unions are affiliated with the central organization, which is usually known as the Labour or the Trades Hall Council, or the Labour Federation. In Western Australia a unified system of organization extends over the industrial centres throughout the State. In this State there is a provincial branch of the Australian Labour Party, having a central council and executive, and metropolitan and branch district councils, to which the local bodies are affiliated. The central council, on which all district councils are represented, meets periodically. In the other five States, however, the organization is not so close, and, while provision usually exists in the rules of the central council at the capital city of each State for the organization of district councils or for the representation on the central council of the local councils in the smaller industrial centres of the State, the councils in each State are, as a matter of fact, independent bodies.

The table below shows the number of metropolitan and district or local labour councils, together with the number of unions and branches of unions affiliated thereto, in each State at the end of the year 1924 :—

CENTRAL LABOUR ORGANIZATIONS.—NUMBER, AND UNIONS AFFILIATED, 1924.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N. Ter.	Total.
Number of Councils	3	5	4	3	9	2	1	27
Number of Unions and Branch Unions affiliated	93	185	81	76	189	41	3	668

The figures given in the preceding table as to number of unions do not necessarily represent separate unions, since the branches of a large union may be affiliated to the local trades councils in the several towns in which they are represented.

Between the trade union and the central organization of unions may be classed certain State or district councils organized on trade lines, and composed of delegates from separate unions, the interests of the members of which are closely connected by reason of the occupations of their members. Delegate councils of bakers, bread carters, and mill employees, or of unions connected directly or indirectly with the iron, steel, or brass trades, or with the building trades may be so classed.

4. Laws relating to Conditions of Labour.—In Official Year Book No. 16, pp. 538 to 566, a conspectus was given of Labour Laws in force in Australia at the end of the year 1922, and of Acts and Regulations relating to Factories and Shops.

Information was contained in the same issue with regard to employment under Mining Acts, followed by a brief reference to Employers' Liability and Workmen's Compensation Acts and miscellaneous legislation relating to conditions of labour enacted by the States. A conspectus of the Tribunals for the Regulation of Wages and Conditions of Labour was also included. Owing to considerations of space these references have been omitted from the present issue.

§ 2. Employers' Associations.

1. **General.**—Recent investigations show that the spirit of association is no less manifest in the case of employers than in the case of workers. Associations for trade purposes merely are not included in the present chapter, which deals with those associations only whose members are united for their own protection, and for representation in cases before Arbitration Courts, Wages Boards and other wage-fixing tribunals. Associations of employers and employees are recognized under the Commonwealth Conciliation and Arbitration Act as well as under several State Acts, and organizations of these bodies may be registered.

2. **Employers' Associations in each State.**—The following table gives particulars of the number of employers' associations in each State at the end of the years 1923 and 1924 :—

EMPLOYERS' ASSOCIATIONS—STATES, 1923 AND 1924.

State.	Number of Associations.		Number of Branches.		Membership.	
	1923.	1924.	1923.	1924.	1923.	1924.
New South Wales	137	127	102	79	27,027	28,667
Victoria	132	135	49	41	19,813	21,095
Queensland	85	80	54	70	12,918	17,060
South Australia	48	49	..	..	5,101	5,746
Western Australia	54	53	12	15	2,477	2,646
Tasmania	24	25	8	5	2,751	2,716
Total	480	469	225	210	70,087	77,930

The decrease in 1924 in the number of associations is partly explained by the exclusion of certain associations which have been found to be not strictly employers' associations, while in some cases associations have become either inactive or defunct. The year 1922 was the first for which information was collected, and particulars for that year will be found in Year Book No. 17.

3. **Employers' Associations in Industrial Groups.**—The figures in the table hereunder refer to Australia at the end of the years 1923 and 1924.

EMPLOYERS' ASSOCIATIONS—INDUSTRIAL GROUPS—AUSTRALIA, 1923 AND 1924.

Class.	Number of Associations.		Number of Branches.		Membership.	
	1923.	1924.	1923.	1924.	1923.	1924.
I. Wood, Furniture, etc. ..	22	23	2	2	1,183	1,398
II. Engineering, etc. ..	17	14	18	12	2,889	3,435
III. Food, Drink, etc. ..	102	101	29	40	13,583	15,556
IV. Clothing, Hats, etc. ..	21	20	6	..	5,278	4,462
V. Books, Printing, etc. ..	36	35	4	..	3,953	3,509
VI. Other Manufacturing ..	43	49	..	2	2,004	3,142
VII. Building	30	28	9	10	2,173	2,754
VIII. Mining, Quarrying, etc. ..	13	13	1	1	372	344
X. Other Land Transport ..	14	14	..	..	2,356	2,240
XI. Shipping, etc. ..	17	16	2	2	300	310
XII. Pastoral, Agricultural, etc. ..	25	25	151	139	18,058	22,280
XIII. Domestic, Hotels, etc. ..	22	18	..	..	3,994	3,696
XIV. Miscellaneous	118	113	3	2	13,944	14,804
Total	480	469	225	210	70,087	77,930

The female membership of these associations was 936 for 1923, and 3,119 for 1924.

The organization of employers is relatively strongest in the pastoral and agricultural industries and in the manufacture and distribution of articles of food and drink. In the former case there has been considerable growth in organization among small farmers, and in the latter the number of small shops purveying foodstuffs of which the proprietors are members of grocers', butchers', and other similar associations accounts for the large membership.

4. Federations of Employers' Associations.—In addition to the associations in various industries, there are central associations in each State, to which many of these separate organizations are affiliated. Examples of this kind of association are provided in the Chamber of Manufactures, Chamber of Commerce, and Employers' Federation in each State. Further, these State associations are, in some cases, organized on a federal basis, *e.g.*, there is an Associated Chamber of Manufactures, an Associated Chamber of Commerce, or a Central Employers' Association, to which State branches are affiliated.

The affiliation of these associations is, however, of a very loose nature when compared with that of the Federated Trade Unions. Whereas in the latter case the central body has complete control of its state branches, in the case of the Employers' Associations each state body enjoys complete independence, the central body acting in a more or less advisory capacity only.

The following table gives particulars, so far as can be ascertained, of inter-state or federated associations having branches in two or more States in 1923 and 1924 :—

INTERSTATE OR FEDERATED EMPLOYERS' ASSOCIATIONS, 1923 AND 1924.

Particulars.	Associations Operating in—					Total.
	2 States.	3 States.	4 States.	5 States.	6 States.	
No. of Associations.						
1923	4	4	4	5	12	29
1924	2	6	6	11	9	34
No. of Members.						
1923	679	2,028	465	16,521	26,832	46,525
1924	427	595	829	29,612	26,523	57,986

CHAPTER XIV.

DEFENCE.

§ 1. Military Defence.

1. *State Systems.*—A detailed historical account of the Australian defence forces prior to federation will be found in Official Year Book No. 2, pp. 1075–1080. See also Official Year Book No. 12, p. 999.

The strength of the military forces of the States prior to federation was generally nearly up to establishment. On the 31st December, 1900 (the eve of Federation), it was :—New South Wales, 9,338 ; Victoria, 6,335 ; Queensland, 4,028 ; South Australia, 2,932 ; Western Australia, 2,696 ; Tasmania, 2,024 ; total for Australia, 27,353. This total is exclusive of cadets, reservists, and rifle club members.

2. *Commonwealth System.*—(i) *General.* Under the terms of the Constitution Act 1900, the Commonwealth took over control of defence matters in March, 1901. The growth of the Commonwealth Military Forces may be considered to have taken place in three phases, viz. :—

- (a) The first phase, *i.e.*, the welding together of the military forces of the States into one homogeneous army, was entrusted by the Government in 1902 to Major-General Sir Edward Hutton, K.C.B., K.C.M.G., and a sound foundation was laid, upon which the subsequent organization and training was based.
- (b) The second phase was the introduction of Universal Training in 1911. During the year 1909 a measure providing for universal training was passed by the Commonwealth Parliament, and the scheme came into force in 1911 after the advice and recommendations of the late Lord Kitchener had been obtained. By the Defence Acts of 1903 and 1904 all male inhabitants between the ages of 18 and 60 years were made liable to serve in Australia with the defence forces *in time of war*. The more recent Acts make training and service compulsory up to the age of 26 years *in time of peace*. By the Act of 1909 the principle of universal liability to training was made law for the first time in any English-speaking community. More detailed reference to these matters will be found in Official Year Book No. 12, p. 999 *et seq.*
- (c) The third phase, Divisional Organization, came into operation from the 1st May, 1921. Under this system a war organization, evolved from the Australian Imperial Force, is applied to peace conditions, with a minimum of permanent staff and forces. Numbers of units and formations have been altered to correspond with those of the A.I.F. and every effort is being made to maintain the traditions established by those units in the Great War.

(ii) *Military Population.* In connexion with the numbers available, the figures of male population are of interest. The total number at cadet age, *i.e.*, between 12 and 18, at the Census of 1921 (4th April) was about 300,000, at citizen soldier age, *i.e.*, between 18 and 26, 353,000 ; these latter, with 409,000 at ages between 26 and 35, give 762,000 as the total males at the best period for military service. It is estimated that 529,000 of those available between the ages of 18 and 35 were not married or widowers without children, and 233,000 were married or widowers with children. In addition, there were about 762,000 between the ages 35 and 60.

(iii) *Allotment of Units.* The organization is territorial, and the divisions based upon infantry units. There are 62 battalions, forming 15 brigades. The areas have approximately equal numbers of males of citizen soldier age, and each furnishes a battalion of infantry, and a proportion of other troops.

ALLOTMENT OF UNITS TO AREAS, 1st FEBRUARY, 1925.

State.	Brigade Areas.	Battalion Areas.													Training Areas.
		Number of Areas.	Providing the undermentioned Units—												
			Infantry Battalions.	Light Horse Regiments.	Field Artillery Batteries.	Engineers.		Signallers.		A.A.M.C.					
						Companies.	Troops.	Sections.	Troops.	A.A.S.C. Companies.	Field Amb.	Sanitary Sections.	A.A.V.C. Sections.		
N.S. Wales ..	5	21	21	7	17	7	3	18	4	10	8	3	4	-35	
Victoria ..	5	21	21	6	17	7	3	18	4	10	7	2	4	27	
Queensland ..	2	8	8	4	7	2	1	9	1	3	3	1	1	10	
S. Aust. ..	1	5	5	4	4	1	1	2	1	12	2	1	1	9	
W. Aust. ..	1	4	4	1	3	1	..	4	..	1	1	1	..	7	
Tasmania ..	1	3	3	1	3	1	..	3	..	1	1	1	..	4	
Total ..	15	62	62	23	51	19	8	54	10	27	22	9	10	92	

(iv) *Strength of Military Forces.* (a) *Districts.* There was little alteration in the numbers serving in the Australian military forces from the institution of the Commonwealth to the year of the introduction of the compulsory training system. From 1913 to 1918, however, the annual increase was considerable. As a result of the International Conference which met at Washington on the 11th November, 1921, it was decided by the Australian Government in 1922 that the universal training law is to be continued, but its operation is to be restricted to the more populous centres and to certain quotas only. As from 1st July, 1925, Senior Cadet training is confined to one quota instead of four quotas, and training commences on the 1st July of the year in which persons liable reach the age of 17 years. Citizen Force training is confined to three quotas instead of seven quotas, and commences on the 1st July of the year in which persons liable reach the age of 18 years, and continues until the 30th June of the year in which they reach the age of 21 years. Notwithstanding these reductions in training, the liability to register at the age of 14 years and to serve for the full period prescribed by the Defence Act remains. Junior Cadet training of boys of the age of 12 and 13 years was in abeyance during the years 1922-23 and 1923-24, but has been resumed as an activity of the Defence Department as from 1st July, 1924. The existing Divisional Organization of the Field Force is being retained in skeleton form, units being maintained at considerably below war strength.

TRAINING STRENGTH OF MILITARY FORCES, 1901, 1913, AND 1920 TO 1925.

(a) District.	1901. (b) 1/3/01	1913. 30/6/13.	1920. 30/6/20.	1921. 31/12/21.	1922. 31/12/22.	1923. 31/12/23.	1925. 1/2/25.
Hd.-Qrs.(c) ..	..	277	463	458	499	58	130
1st (Q'ld.) ..	4,310	4,625	13,323	14,752	4,319	4,212	4,263
2nd (N.S.W.) ..	9,772	12,105	38,558	46,924	14,561	15,211	15,420
3rd (Vict.) ..	7,011	10,840	30,762	41,484	11,117	11,825	11,847
4th (S. Aus.) ..	2,956	3,228	10,590	12,495	3,452	3,828	3,772
5th (W. Aus.) ..	2,283	1,885	4,400	6,540	2,018	2,170	2,205
6th (Tas.) ..	2,554	1,777	4,569	5,307	1,190	1,299	1,252
Total ..	28,886	34,537	102,665	127,960	37,156	38,603	38,889

(a) Approximately coterminous with boundaries of States. (b) Date of taking over the military forces from States by Commonwealth. (c) Including cadets at Royal Military College of Australia.

(b) *Various Arms.* The numbers of the different arms of the service on the 1st February, 1925, were as follows:—

ARMS OF THE COMMONWEALTH MILITARY FORCES, 1st FEBRUARY, 1925.(a)

Light Horse	3,746	Ordnance (including Armament	
Field Artillery	4,242	Artificers)	42
Garrison Artillery	1,003	Survey Section (Engineers) ..	14
Field Engineers	1,559	R.A.E. Works Section	18
Signallers	1,240	Royal Military College (Cadets)	50
Fortress Engineers	208	Provost Staff	15
Infantry	23,265	Legal Department	16
Army Service Corps	1,223	Intelligence Section, G.S. ..	10
Army Medical Corps	1,209	Engineer and Railway Staff Corps	52
Army Veterinary Corps ..	136		
Staff Corps	242		
Australian Instructional Corps	599	Grand Total	38,889

(a) Excluding civilian staff.

(c) *Classification of Land Forces.* The following table shows the strength of the land forces in each State, classified according to nature of service, on the 1st February, 1925:—

CLASSIFICATION OF LAND FORCES,(a) 1st FEBRUARY, 1925.

Branch of Service.	Army Head- quarters.	1st Military District. (Qld.)	2nd Military District. (N.S.W.)	3rd Military District. (Vic.)	4th Military District. (S. Aus.)	5th Military District. (W. Aus.)	6th Military District. (Tas.)	Total.
Permanently employed ..	(b)130	150	637	496	91	129	64	1,697
Citizen Soldiers		4,113	14,783	11,351	3,681	2,076	1,188	37,192
Unattached List of Officers		51	148	199	29	16	26	469
Engineer and Railway Staff								
Corps	5	10	9	10	6	8	4	52
Reserve of Officers		1,344	4,313	3,986	1,088	888	366	11,985
Chaplains		58	72	142	41	32	21	366
Total	135	5,726	19,962	16,184	4,936	3,149	1,669	51,761

(a) Excluding civilian staff.

(b) Including Cadets at Royal Military College of Australia.

(d) *Numbers Serving under Compulsory Provisions.—(1) General.* The following tables show the numbers registered and training under the compulsory system, distinguishing Citizen Forces and Senior Cadets.

(2) *Citizen Forces 1905 and 1906 Quotas.* Registrations under these quotas as at the 31st December, 1924, are given hereunder.

UNIVERSAL TRAINING.—CITIZEN FORCES REGISTRATIONS, QUOTAS IN TRAINING (1905 AND 1906 QUOTAS), AS AT 31st DECEMBER, 1924.

Military Formations and Districts.	1906 Quota.	1905 Quota.	Total Registrations.
1st Division (2nd M.D.)	4,711	4,327	9,038
2nd Division (2nd M.D.)	7,396	7,129	14,525
3rd Division (3rd M.D.)	5,596	5,765	11,361
4th Division (3rd M.D.)	3,583	3,673	7,256
4th Division (4th M.D.)	3,308	3,312	6,620
11th Mixed Brigade (1st M.D.) ..	4,157	4,318	8,475
12th Mixed Brigade (6th M.D.) ..	1,160	1,296	2,456
13th Mixed Brigade (5th M.D.) ..	2,139	2,190	4,329
Total	32,050	32,010	64,060

(3) *Registrations, 1899 to 1904 Quotas.* Figures relating to these quotas have been included in the next table :—

CITIZEN FORCES.—REGISTRATIONS, QUOTAS NOT IN TRAINING (1899 TO 1904 QUOTAS), AS AT 31st DECEMBER, 1924.(a)

Military District.	Total Registrations in Training Areas.						Total.
	Quota, 1899.	Quota, 1900.	Quota, 1901.	Quota, 1902.	Quota, 1903.	Quota, 1904.	
1st	4,915	4,865	4,453	4,260	3,673	4,154	26,320
2nd	9,607	10,058	9,970	10,451	10,968	12,052	63,106
3rd	6,747	7,325	7,390	7,248	8,359	9,340	46,409
4th	3,014	3,226	2,878	2,805	2,874	3,261	18,058
5th	1,222	1,178	1,244	1,347	1,989	2,095	9,075
6th	1,248	1,381	1,222	1,181	1,204	1,300	7,536
Total	26,753	28,033	27,157	27,292	29,067	32,202	170,504

(a) Latest particulars available, as no training is required of these quotas.

(4) *Exemptions and Missing Trainees.* Particulars for the 1905 and 1906 quotas are given hereunder :—

CITIZEN FORCES.—EXEMPTIONS AND MISSING TRAINEES, QUOTAS IN TRAINING (1905 AND 1906 QUOTAS), 31st DECEMBER, 1924.

Military Formations and Districts.	Exemptions.			Missing Trainees.
	1906 Quota.	1905 Quota.	Total.	1906 and 1905 Quotas.
1st Division (2nd M.D.) ..	2,083	2,105	4,188	145
2nd Division (2nd M.D.) ..	3,207	3,354	6,561	411
3rd Division (3rd M.D.) ..	2,139	2,347	4,486	494
4th Division (3rd M.D.) ..	1,910	1,999	3,909	233
4th Division (4th M.D.) ..	1,673	1,705	3,378	87
11th Mixed Brigade (1st M.D.)	2,542	2,649	5,191	50
12th Mixed Brigade (6th M.D.)	724	812	1,536	86
13th Mixed Brigade (5th M.D.)	1,241	1,380	2,621	14
Total	15,519	16,351	31,870	1,520

(5) *Trainees Serving with Senior Cadets as Officers.* The number of Citizen Force trainees serving as officers of Senior Cadets at the end of 1924 is given in the next table :—

TRAINEES OF CITIZEN FORCE AGE SERVING AS OFFICERS OF SENIOR CADETS, 31st DECEMBER, 1924.

Military Formations and Districts.	1906 Quota.	1905 Quota.	Total.
1st Division (2nd M.D.) ..	36	10	46
2nd Division (2nd M.D.) ..	56	28	84
3rd Division (3rd M.D.) ..	38	11	49
4th Division (3rd M.D.) ..	18	9	27
4th Division (4th M.D.) ..	23	11	34
11th Mixed Brigade (1st M.D.)	21	10	31
12th Mixed Brigade (6th M.D.)	3	1	4
13th Mixed Brigade (5th M.D.)	14	3	17
Total	209	83	292

(6) *Senior Cadets—Registrations, etc.* Registrations and numbers in training from the 1907 to 1910 quotas at the end of 1924 are shown in the next table :—

**SENIOR CADETS.—REGISTRATIONS AND NUMBER ACTUALLY IN TRAINING,
31st DECEMBER, 1924 (1907 TO 1910 QUOTAS).**

Military Formations and Districts.	Total Registrations.—Senior Cadets.					Number actually in Training.—Senior Cadets.		
	1910 Quota.	1909 Quota.	1908 Quota.	1907 Quota.	Total.	1908 Quota.	1907 Quota.	Total.
1st Division (2nd M.D.) ..	2,492	2,882	3,879	4,399	13,652	2,786	2,689	5,475
2nd Division (2nd M.D.) ..	4,891	5,546	7,011	7,602	25,050	4,671	4,576	9,247
3rd Division (3rd M.D.) ..	3,384	3,861	5,299	5,592	18,136	3,739	3,598	7,337
4th Division (3rd M.D.) ..	2,278	2,244	3,038	3,413	10,973	1,818	1,718	3,536
4th Division (4th M.D.) ..	2,104	2,226	3,255	3,132	10,717	2,040	1,803	3,843
11th Mixed Brigade (1st M.D.)	2,602	2,913	3,914	4,172	13,601	2,148	1,972	4,120
12th Mixed Brigade (6th M.D.) ..	820	777	1,033	1,074	3,704	479	400	879
13th Mixed Brigade (5th M.D.) ..	1,430	1,469	1,894	2,044	6,837	1,177	1,095	2,272
Total	20,001	21,918	29,323	31,428	102,670	18,858	17,851	36,709

(7) *Senior Cadets—Exemptions and Missing Trainees.* Figures regarding these at the end of 1924 are shown below :—

SENIOR CADETS.—EXEMPTIONS AND MISSING TRAINEES, 31st DECEMBER, 1924.

Military Formations and Districts	Exemptions.					Missing Trainees.
	1910 Quota.	1909 Quota.	1908 Quota.	1907 Quota.	Total.	
1st Division (2nd M.D.) ..	1	21	1,061	1,654	2,737	88
2nd Division (2nd M.D.) ..	28	49	2,251	2,899	5,227	214
3rd Division (3rd M.D.) ..	2	44	1,453	1,845	3,344	261
4th Division (3rd M.D.) ..	5	10	1,144	1,624	2,783	136
4th Division (4th M.D.) ..	30	34	1,194	1,283	2,541	67
11th Mixed Brigade (1st M.D.)	46	111	1,704	2,165	4,026	97
12th Mixed Brigade (6th M.D.)	13	16	537	654	1,220	37
13th Mixed Brigade (5th M.D.)	9	34	699	948	1,690	10
Total	134	319	10,043	13,072	23,568	910

(8) *Citizen Forces—Medical Examinations.* The following table shows the results of examinations of the 1906 quota as at the end of 1924 :—

**CITIZEN FORCES—MEDICAL EXAMINATIONS, 1906 QUOTA, YEAR ENDED
31st DECEMBER, 1924.**

Military Formations and Districts.	Number of Examinations carried out.	Fit.		Unfit (A.M.R. 369).		Unfit (including those under A.M.R. 780, but excluding those under A.M.R. 369).	
		Number.	Per-centage.	Number.	Per-centage.	Number.	Per-centage.
1st Division (2nd M.D.)	3,030	2,636	87.00	117	3.86	277	9.14
2nd Division (2nd M.D.)	5,083	4,322	85.03	163	3.21	598	11.76
3rd Division (3rd M.D.)	4,287	3,540	82.57	198	4.62	549	12.81
4th Division (3rd M.D.)	1,984	1,668	84.07	29	1.46	287	14.47
4th Division (4th M.D.)	1,989	1,664	83.66	73	3.67	252	12.67
11th Mixed Brigade (1st M.D.) ..	2,295	1,699	74.03	304	13.25	292	12.72
12th Mixed Brigade (6th M.D.) ..	546	409	74.91	5	0.91	132	24.18
13th Mixed Brigade (5th M.D.) ..	1,162	969	83.39	85	7.32	108	9.29
Total ..	20,376	16,907	82.98	974	4.78	2,495	12.24

(v) *Administration and Instruction.* The staff provided for the administration and training of the various arms consists of 242 officers (Staff Corps), 47 quartermasters, and 552 warrant and non-commissioned officers (Australian Instructional Corps).

(vi) *Royal Military College, Duntroon.* This College was established at Duntroon in the Federal Capital Territory for the purpose of providing trained officers for the permanent forces. Admission is by open competitive examination, a definite number of vacancies being allotted to each State on a population basis. Further particulars respecting the College are given on page 915 of Official Year Book No. 15. In January, 1925, the staff numbered—military, 21; civil, 10.

(vii) *Railways and Defence.* A War Railway Council, consisting of military and railway officers, was instituted in 1911. Its chief duties are to furnish advice and information regarding railway transport for military purposes, and to secure co-operation between the Defence Department and the Railway Departments in regard to concentration and mobilization of troops. To prevent delay in the transport of troops, particularly that caused by the transhipment of baggage and implements of war, the Council has recommended the adoption of a uniform railway gauge on lines linking up the States' capitals. An Engineer and Railway Staff Corps has been instituted, and numbered 52 officers on 1st February, 1925. Fuller details will be found in Official Year Book No. 6, pp. 1070-1.

(viii) *Rifle Clubs.* On the 31st May, 1925, there were 1,120 rifle clubs with a membership of 42,727, and 103 miniature rifle clubs having a membership of 3,834. Applications to form rifle clubs are made to the commandant of a district, and must be signed by not less than thirty male persons between the ages of 16 and 60, who must be natural-born or naturalized British subjects not undergoing training under the universal clauses of the Defence Act. Persons, however, who are temporarily exempted from universal training may be permitted to join rifle clubs during the period of their temporary exemption. Members of rifle clubs must fire an annual course of musketry, but do not undergo any systematic drill.

On the 3rd August, 1921, the administration of rifle clubs was transferred from military to civil control, and rifle clubs ceased to form part of the military organization.

§ 2. Naval Defence.

1. *State Systems.*—Information regarding naval defence systems prior to 1901 will be found in Official Year Book No. 12, p. 1011, but considerations of space preclude its insertion in the present volume

2. **Commonwealth System from 1901.**—Australian defence, in both its branches (naval and military), passed to the Commonwealth in 1901. Prior to 1905 a naval officer commanding administered the naval forces under the Minister. When the Council of Defence was established in 1905, the Naval Board was constituted, which took over the administration of the Commonwealth naval forces, thereby ensuring continuity of policy and administration. His Majesty the King approved of a flag, similar to that used by the Board of Admiralty, being flown when the Naval Board is present in an official capacity, and this flag has taken its place amongst the naval flags of the nations.

3. **The Present System.**—(i) *General.* An outline of the development of Australian naval policy was given in Official Year Book No. 3, pp. 1060–61, and No. 12, p. 1012. Some account of the building of the Australian Fleet, the proposed and modified cost thereof, the compact with the Imperial Government, etc., appears in Official Year Book No. 15, pp. 921 *et seq.* Up to the 30th June, 1924, the expenditure on construction amounted to £7,171,583.

The Washington Conference of 1921 has had a marked effect on Naval Defence schemes, and all warship building and naval base construction have been suspended. The Fleet personnel was reduced from 4,843 in 1921 to 3,500 in 1923, and the ships in commission were reduced from 25 to 13. H.M.A.S. *Australia* was sunk in accordance with the provisions of the Washington Treaty on 12th April, 1924.

The Commonwealth Government, however, recently decided to build two 10,000 cruisers (the maximum size at present allowed for new construction under the Washington Conference), two ocean-going submarines, and a seaplane-carrier. The order for the two cruisers was placed in Scotland, and they are expected to be in commission in 1928. The two submarines, which will be built in England, should be delivered early in 1927. The seaplane-carrier (approx. 6,000 tons) is to be built at Cockatoo Island Dockyard, Sydney, by the Commonwealth Shipping Board.

The British Admiralty have, in addition, lent to the Royal Australian Navy the sloop *Silvio*, which has been refitted in England as a surveying ship, and renamed H.M.A.S. *Moresby*. This vessel will be employed with H.M.A.S. *Geranium* in surveying Australian waters, and should reach Australia approximately in August, 1925. In addition, the Commonwealth Government has agreed to subsidize the New South Wales Government in connexion with the building of a floating dock, which will be available for naval use in times of war or emergency.

(ii) *Naval College.* A naval college was established at Geelong in 1913, and was transferred in 1915 to Captain's Point, Jervis Bay, New South Wales. The course is similar to that carried out in naval colleges in England. In May, 1925, there were 49 cadet midshipmen under training. A boy whose thirteenth birthday falls in the year in which the entrance examination is held is eligible to compete, provided he is the son of natural-born or naturalized British subjects. From amongst those qualified, the selection committee chooses the number required. The Commonwealth Government bears the whole expense of uniforms, victualling, travelling, as well as that of the educational course. Altogether 135 officers who have passed through the College are now serving with the Fleet.

(iii) *Training Ships.* H.M.A.S. *Tingira*, moored in Rose Bay, Sydney, was commissioned in April, 1912, to train boys for the personnel of the Royal Australian Navy. The age of entry is 14½ to 16½ years. Only boys of very good character and physique are accepted, after a strict medical examination, and they must engage to serve until they reach the age of 30. The training lasts about one year, and trainees are then drafted to a sea-going warship of the Australian Fleet. Recruiting has been satisfactory, and 256 boys were under training on 15th May, 1925.

(iv) *The Naval Station.* The following are the limits of the Naval Station which, since 1st June, 1919, has been controlled by the Commonwealth Government, acting through the Naval Board:—North: From a point in 95 degrees East longitude and 13 degrees South latitude along that parallel to the Eastward to the meridian of 120 degrees East longitude; thence along that meridian to the Northward to 11 degrees South latitude; thence in an easterly direction to the southern termination of the eastern boundary of Dutch New Guinea in about 141 degrees East longitude; thence along the meridian of the boundary to the Northward to the Equator; thence along

the Equator to the Eastward to 170 degrees East longitude. East: From a point on the Equator on the meridian of 170 degrees East longitude along that meridian to the Southward to 32 degrees South latitude; thence along that parallel to the Westward to the meridian of 160 degrees East longitude; thence along that meridian to the South Pole. South: The South Pole. West: From the South Pole by the meridian of 80 degrees East longitude to the Northward of 30 degrees South latitude; thence along that parallel to the Eastward to the meridian of 95 degrees East longitude; thence along that meridian to the Northward to 13 degrees South latitude.

(v) *Vessels.* A list of the vessels of the Royal Australian Navy is given hereunder.

SHIPS OF THE ROYAL AUSTRALIAN NAVY, JUNE, 1925.

Vessel.	Description.	Displacement.	Power.
		Tons.	H.P.
<i>Adelaide</i>	Cruiser	5,500	25,000
<i>Anzac</i>	Flotilla Leader	1,660	36,000
<i>Brisbane</i>	Cruiser	5,400	25,000
<i>Cerberus</i>	Motor-boat	61	220
<i>Penguin</i>	Depot Ship	5,880	12,500
<i>Geranium</i>	Sloop	1,250	2,000
<i>Huon</i>	T.B. Destroyer	700	11,300
<i>Mallow</i>	Sloop	1,200	1,800
<i>Marguerite</i>	"	1,250	2,200
<i>Melbourne</i>	Cruiser	5,400	25,000
<i>Moresby</i>	Sloop	1,320	2,500
<i>Parramatta</i>	T.B. Destroyer	700	9,000
<i>Stahwart</i>	"	1,075	27,000
<i>Success</i>	"	1,075	27,000
<i>Swan</i>	"	700	10,000
<i>Swordsman</i>	"	1,075	27,000
<i>Sydney</i>	Cruiser	5,400	25,000
<i>Tasmania</i>	T.B. Destroyer	1,075	27,000
<i>Tattoo</i>	"	1,075	27,000
<i>Tingira</i>	Boys' Training Ship	1,800	..
<i>Torrens</i>	T.B. Destroyer	700	10,000
<i>Warrego</i>	"	700	9,000
<i>Yarra</i>	"	700	9,000
FLEET AUXILIARIES—			
<i>Biloela</i>	Fleet Collier and Oiler	5,700	2,300
<i>Kurumba</i>	Fleet Oiler	3,970	..

(vi) *Naval Forces.* Besides the sea-going forces, there is a R.A.N. Reserve, which is composed of Citizen Naval Trainees. The personnel of the sea-going forces, which was originally largely composed of Imperial officers and men, is now mainly Australian and will become more so as time goes on. The strength of the naval forces is given hereunder.

STRENGTH OF NAVAL FORCES (PERMANENT AND RESERVES), 15th MAY, 1925.

Description of Force.	Numbers Borne.		
	In Training.	Officers.	Men.
Royal Australian Navy (Sea-going) .. ..	..	406	4,219
Cadet Midshipmen undergoing training at R.A.N. College	49	..	..
Boys undergoing training on H.M.A.S. <i>Tingira</i>	256	..	..
Royal Australian Naval Reserve (Sea-going) .. ..	..	58	..
Royal Australian Fleet Reserve .. ..	..	..	131
Royal Australian Naval Reserve .. ..	..	145	5,804
Royal Australian Naval Volunteer Reserve .. ..	..	3	31

§ 3. Air Defence.

1. **General.**—Having regard to the development in aircraft, the Australian military authorities, as early as 1911, were considering the question of providing for local air defence. In 1912 approval was given for the establishment, as part of the army organization, of a Central Flying School for the training of aeroplane pilots. An area of land was acquired at Point Cook, Victoria; hangars and workshops were erected, and two flying instructors, four mechanics, and five aeroplanes were obtained from England. In June, 1914, the work at Point Cook was sufficiently advanced to permit the commencement of training, and the first course was arranged to begin on the 14th August, 1914. The training of pilots at the School continued actively throughout the War, but after the cessation of hostilities the staff was reduced to a small nucleus.

No steps were taken towards the establishment of a Naval Air Service beyond the appointment, in 1918, of an Air Adviser to the Navy Department.

In 1920 it was resolved to establish an Australian Air Force. Pending the passing of an Air Defence Bill, the Australian Air Force was constituted by proclamation issued under the powers contained in the Defence Act 1903–1918, as part of the Australian Military Forces. This was effected as from 31st March, 1921, and from 13th August, 1921, the Force was designated the Royal Australian Air Force. The Air Defence Bill was passed by the Senate in May of that year, but lapsed on the prorogation of Parliament. The Air Defence Bill was presented to Parliament again in 1923 and after debate was withdrawn and a short Bill drafted—entitled the Air Force Act 1923. This Bill passed through all stages and was assented to on 1st September, 1923. It is a temporary measure constituting the Royal Australian Air Force an autonomous arm of the Defence Forces, and will probably be superseded by a more comprehensive measure.

Under the new Air Board Regulations issued in October, 1922, the Royal Australian Air Force is administered by a Board consisting of two Air Force members and a Finance member. To this Force is entrusted the air defence of Australia, the training of personnel for co-operation with the naval and military forces, and the refresher training of pilots engaging in civil aviation. The present establishment of the Force includes the following units:—

- (a) Head-Quarters, Royal Australian Air Force, with representation at the Air Ministry in London;
- (b) One Station containing a Flying Training School, a Stores Depot, and one composite squadron.
- (c) One Station containing one composite squadron and one flight.
- (d) An Experimental Section.

In deciding all matters of policy the Minister is assisted by a representative Air Council, which includes officers of the Navy, Army, and Air Force, and the Controller of Civil Aviation.

2. **Establishment.**—The present approved establishment of the Permanent Air Force is 71 officers and 453 airmen.

The policy of the Air Force is to form in peace an efficient nucleus which in time of war will be capable of rapid expansion to meet war requirements.

3. **Aerial Routes.**—Aerodromes and Alighting Sites have been prepared between the capital cities and on certain parts of the coast for service and civil purposes. The total number prepared to date is 120.

4. **Civil Aviation.**—Details regarding the formation and activities of the Civil Aviation Department will be found in Chapter VII., Section D. Aircraft.

§ 4. Expenditure on Defence.

1. Expenditure, 1901-2 to 1924-25.—The following table shows Defence expenditure in various years from 1901-2 to 1924-25. Details of the expenditure of the Defence Department and the cost of the war and repatriation are given in Chapter VIII.—Finance.

DEFENCE EXPENDITURE.—AUSTRALIA, 1901-2 TO 1924-25.

Year.	Naval.		Military.		Air.		Total Defence Expenditure. (a) (b)
	Under Ordinary Votes and Appropriations.	Total Naval. (a)	Under Ordinary Votes and Appropriations.	Total Military. (a)	Under Ordinary Votes and Appropriations.	Total Air. (a)	
	£	£	£	£	£	£	£
1901-2 ..	178,819	178,819	777,620	780,260	..	..	959,079
1906-7 ..	255,120	256,066	585,516	779,729	..	..	1,035,795
1911-12 ..	461,546	1,634,466	1,607,103	2,443,382	..	4,000	4,081,845
1916-17 ..	1,510,542	6,641,249	1,532,619	59,364,998	12,156	36,758	66,043,008
1921-22(b) ..	2,375,965	3,212,736	1,925,924	41,726,436	155,082	285,686	45,224,858
1922-23(b) ..	2,124,491	2,575,181	1,481,754	33,351,849	179,337	273,031	36,200,011
1923-24(b) ..	2,084,420	2,279,310	1,545,454	32,922,571	222,657	306,418	35,508,299
1924-25(b) (Estimated)	2,086,021	2,386,234	1,507,270	32,182,149	225,865	307,099	34,875,482

(a) During the war years and subsequently, war expenditure and war expenditure on works included in total. (b) Not including War Gratuity (see p. 613).

NOTE.—In the year 1900-1 the approximate Defence Expenditure by the States was:—

Ordinary Services ..	£800,000
Works, Arms, Equipment, etc. ..	200,000
Total ..	£1,000,000

2. Comparison with Other Countries.—The total expenditure on defence and the expenditure per inhabitant in various countries according to estimates made immediately prior to the late war and for the latest available year are as follows:—

ESTIMATED PRE-WAR AND POST-WAR EXPENDITURE ON DEFENCE.—VARIOUS COUNTRIES.

Country.	Year.	Total Expenditure.	Per Inhabitant.	Year.	Total Expenditure.(a)	Per Inhabitant.
		£	s. d.		£	s. d.
Great Britain ..	1913-14	77,179,000	33 9	1924-25	115,311,000	53 9
Germany ..	..	97,845,000	30 2	..	23,177,000	7 9
France ..	1913	56,738,000	28 7	1925	56,080,000	28 7
Italy ..	1913-14	23,614,000	13 7	1924-25	24,719,000	12 6
Switzerland ..	1913	1,772,000	9 1	1925	3,428,000	17 8
Spain ..	..	9,218,000	9 3	1924-25	14,430,000	13 3
Portugal ..	1913-14	3,041,000	10 3	1925-26	1,830,000	6 1
Norway ..	..	1,204,000	9 11	1924-25	1,476,000	11 2
Sweden ..	1913	4,510,000	16 0	..	8,510,000	28 4
Denmark ..	1913-14	1,625,000	11 5	1925-26	2,516,000	15 5
Holland ..	1913	4,458,000	14 6	1924	8,616,000	24 4
Belgium ..	..	3,260,000	8 7	..	9,192,000	24 0
United States ..	1913-14	64,537,000	14 0	1925-26	128,723,000	24 4
Canada ..	1912-13	1,872,000	5 2	1924-25	2,445,000	5 7
Japan ..	1913-14	12,039,000	3 6	..	24,192,000	8 2
Australia ..	..	4,752,000	19 5	..	4,468,212	15 3
New Zealand ..	..	539,000	9 11	1923-24	634,000	9 10

(a) Excluding expenditure in connexion with the late War.

§ 5. Munitions Supply.

1. *General*.—Owing to the necessity for the creation of Australian sources for the supply of munitions of war, authority was given for the establishment of a Munitions Supply Board consisting of a Controller-General and two Controllers, who are charged with the following :—

- (a) Provision of such armament, arms, ammunition, equipment, supplies and stores of all kinds as may be demanded by the various Naval, Military and Air Services.
- (b) Research—chemical and physical investigation of raw materials and products, and of the manufacturing processes to which such materials are subjected.
- (c) Inspection and examination of supplies obtained in Australia other than food, forage and fuel supplies up to point of issue to service.
- (d) Administration of industrial establishments and factories established or to be established.

The Contract Board, which is a part of the Munitions Supply organization, consists of a Chairman appointed by the Munitions Supply Board and a representative from each of the three arms of the service. This Board has branches in all States and is the chief purchasing agent of the Department. Apart from the existing munition factories, the Board has set up and controls a Research Laboratory at Maribyrnong (Victoria) and an Inspection Branch at Footscray (Victoria) and Lithgow (New South Wales) and has at present in course of construction a Gun Ammunition Factory for the manufacture of Field Artillery ammunition, an Ordnance Factory which will supply 18-pdr. guns and shells, a T.N.T. and Filling Factory for the manufacture of high explosives and loading artillery ammunition, and a Machine Gun and Pistol Factory at the Small Arms Factory. These factories will provide for normal peace requirements only. They will, however, serve a dual purpose, inasmuch as they will afford an opportunity of preparing for war by training staff and employees in the technique of manufacture according to local conditions, while providing models for expansion and duplication should the occasion arise, in addition to acting as technical schools for commercial establishments in the event of the latter being converted to war purposes.

2. *Factories*.—(1). *General*. The Explosives Factories at Maribyrnong, Victoria, which manufacture explosives for cartridges and artillery ammunition, were established in 1911. The staff at 30th June, 1924, numbered 99.

The Cordite Factory, Maribyrnong, Victoria, which manufactures explosives for cartridges and artillery ammunition, was established in 1911. The staff at 30th June, 1924, numbered 99.

The Acetate of Lime Factory, established at Bulimba, Brisbane, in September, 1918, provides acetate of lime (a raw material used in the manufacture of acetone) and is at present producing alcohol fuel for the use of Government motor vehicles. The number of employees at 30th June, 1924, numbered 30.

The Clothing Factory at Melbourne, Victoria, which had a staff of 222 employees on 30th June, 1924, commenced output in July, 1912, and since that date has been able to supply the whole of the uniform clothing required for the Defence forces, and the Postmaster-General's Department. It also supplies clothing required by State Departments and local public bodies.

The Small Arms Factory at Lithgow, New South Wales, which was opened on 1st June, 1912, and delivered the first instalment of Australian arms in May, 1913, had on its pay roll on 30th June, 1924, 345 employees. Rifles are being produced, and the manufacture of pistols and machine guns has been undertaken.

On 1st January, 1921, by virtue of an agreement with the Colonial Ammunition Company Limited, the Defence Department entered into possession on lease of the Company's works at Footscray, Victoria, and had at 30th June, 1924, 189 persons employed there. The works are now known as the Defence Small Arms Ammunition Factory, and rifle and pistol ammunition are manufactured there.

(ii) *Expenditure on Factories.* The expenditure up to 30th June, 1924, on land, buildings, machinery and plant, factory fittings and furniture in connexion with the factories now in operation was approximately as follows:—Small Arms Factory, £421,043; Explosives Factories, £307,120; Clothing Factory, £37,142; Acetate of Lime Factory, £154,159.

§ 6. Remount Depot.

The Defence Act of 1910 authorized the establishment and maintenance of remount depots, farms, and stations for the breeding of horses. A few thoroughbred stallions are maintained by the Department for the service, at a low fee, of approved privately-owned mares. Horses are maintained primarily to supply the requirements of the Field Artillery Batteries, but are also available for the use of other mounted units. Remount depots have been purchased or are leased in each of the military districts, veterinary hospitals have been established, and stables have been built in all States. A remount section of the Army Service Corps has been formed for the purpose of breaking, training and looking after remounts generally. These sections are so organized as to be capable of rapid expansion in case of emergency. When war was declared in 1914 little difficulty was experienced by the Remount Service in coping with the enormous task of obtaining and training horses for the mounted units of the A.I.F. and in providing for the shipment of horses to Egypt and India as required.

§ 7. Australian Contingents.

1. *General.*—In previous issues of the Year Book an account was given of the composition, etc., of the Australian contingents despatched for service in the New Zealand and Sudan Campaigns, in South Africa, China, and the Great War of 1914–18 (see Official Year Book No. 12, pp. 1019 *et seq.*).

2. *Australian Troops (Great War).*—Particulars of the enlistments, casualties, honours and decorations won, and engagements of the Australian Imperial Force during the Great War were given in Official Year Book No. 16, pp. 628 *et seq.* Limits of space, however, preclude the repetition of this information in the present volume.

§ 8. War Gratuity.

Reference was made in preceding Year Books (see No. 15, p. 930) to the bonus payable in accordance with the War Gratuity Acts of 1920 as a war service gratuity to soldiers and sailors who served in the Great War. Owing to limitations of space this information cannot be repeated, but it may be noted that the gratuity was paid in Treasury bonds, maturing not later than 31st May, 1924, and bearing interest at 5½ per cent. In necessitous cases, payment was made in cash, when desired by the person entitled. The first gratuities were made available about the beginning of June, 1920. The gratuities numbered 360,000, and the total amount paid was £27,424,317.

§ 9. Special Defence Legislation.

Information regarding special defence legislation enacted by the Commonwealth Government during the War was given in Official Year Book No. 15, p. 930. It may be pointed out here that the War Precautions Act Repeal Act of 1920 repealed the Act 1914–18, but a limited number of matters dealt with under the original Act are now provided for under the War Precautions Act Repeal Act of 1920 or by regulations made thereunder.

§ 10. Repatriation.

1. *General.*—An outline of the activities leading up to the formation of the Commonwealth Department of Repatriation was given in Official Year Book No. 15, p. 931, but limits of space preclude its repetition in the present volume. Some account was given also in the Year Book referred to, and in subsequent issues, of the policy and activities of the Department generally, while detailed information was incorporated in regard to such matters as sustenance rates and pensions to soldiers and dependents. (See Official Year Book 17, pp. 598 to 601.)

2. *Pensions*.—The pensions in force on the 1st May, 1925, numbered 243,056, and the amount expended thereon during the eleven months ending 30th April, 1925, was £5,942,349.

3. *Summary of Activities*.—The following is a summary of the work of the Department from 8th April, 1918, to 30th April, 1925:—

(i) *Employment*.—Number of applications, 246,301; number of positions filled, 131,509.

(ii) *Vocational Training*.—Number of men completed training, 24,889; number in training, 2,278.

(iii) *Assistance other than Vocational Training and Employment*.—Applications received, 582,444; applications approved, 503,380.

(iv) *Soldiers' Children's Education Scheme*. From the inauguration of the scheme in February, 1921, up to 30th April, 1925, 6,159 applications for assistance had been received. Of these 5,146 had been approved, of which 845 recipients of the benefits had completed their training, 93 applications were pending, and the remainder had been refused or withdrawn.

It is estimated that the scheme will involve an outlay of £1,250,000, of which the Commonwealth has undertaken to provide £800,000, while it is hoped that the balance will be forthcoming from private and public funds and benefactions. Up to 30th April, 1925, the expenditure was £304,504.

(v). *Assistance Granted*.—The total expenditure incurred during the period 8th April, 1918, to 30th April, 1925, was £14,257,000, of which £8½ millions represented gifts, £1½ million loans, and about £4 millions general expenditure. Of the total the largest amounts were absorbed by vocational training, with nearly £5 millions, and expenses of providing employment £2½ millions.

4. *Settlement of Soldiers on the Land*.—At the Premiers' Conference in Melbourne in 1917 it was agreed that the States should undertake the work of settling on the land returned soldiers and munition and war workers, but that the Commonwealth should finance them for this purpose.

The original arrangement provided that the Commonwealth should take the responsibility of finding up to £500 per settler as working capital for improvements, implements, seed, etc., an amount which was subsequently increased to £625 per settler, together with £375 per settler for resumptions and works incidental to land settlement approved by the Commonwealth. Particulars of the advances to the States are shown in the following table:—

ADVANCES TO STATES FOR SOLDIER SETTLEMENT, AT 30th JUNE, 1924.

State.	No. of Settlers.	Advances agreed upon.	Advanced during 1923-24.	Advanced to 30th June, 1924.	Advances outstanding 30.6.24.
	No.	£	£	£	£
New South Wales	8,405	12,254,191	..	9,826,203	9,806,057
Victoria	11,000	15,708,514	..	11,968,176	11,794,075
Queensland	3,898	3,290,789	..	2,779,451	2,762,337
South Australia	5,000	6,265,471	..	2,857,780	2,833,005
Western Australia	5,186	6,278,750	600,000	5,463,782	5,431,202
Tasmania	2,821	3,521,234	19,280	2,168,303	2,129,563
Total	36,310	47,318,949	619,280	35,063,695	34,756,239

Prior to the occupancy of the land, the Repatriation Department was empowered to pay sustenance for a limited period, subject to certain conditions, also for 6 months during the first 2 years of occupancy while awaiting production.

5. **Conspectus of State Laws affecting Settlement of Returned Soldiers on the Land.**—In Official Year Book No. 13, pp. 1018 *et seq.*, will be found a table giving particulars of the laws of the various States relating to returned soldiers' land settlement.

Later modifications have been made with a view to simplifying procedure and liberalizing the conditions under which holdings may be acquired.

§ 11. War Service Homes.

The operations of the War Service Homes Commission at 31st May, 1925, may be briefly set out as follows:—28,619 applications involving advances amounting to approximately £18,870,304 had been approved; 12,745 houses had been completed; 128 applicants had been assisted to complete or enlarge dwelling-houses partly owned; 1,000 houses were in course of construction; and 975 building applications had been approved in respect of which building operations had not been commenced.

In addition, the Commission had purchased on behalf of eligible applicants 11,942 already-existing properties, and had taken over mortgages existing on 1,876 dwelling-houses, but in a number of cases actual settlement and transfer has not taken place. Applications in respect of 47 completed houses had not, however, been definitely approved, but pending this action the majority of the houses are occupied by the applicants under a weekly tenancy agreement.

The foregoing figures include the operations of the State Bank of South Australia, which is now carrying out the provisions of the War Service Homes Act in South Australia, the Commonwealth's obligations being to make available to the Government as a loan the funds required for the purpose.

CHAPTER XV.

THE TERRITORIES OF THE COMMONWEALTH.

A. GENERAL.

1. **Classification.**—The Territories of, or under the control of, the Commonwealth are of three classes—

- (a) Territories originally parts of the States which have been surrendered by the States to the Commonwealth. These are the Northern Territory (formerly part of the State of South Australia) and the Federal Capital Territory (formerly part of the State of New South Wales).
- (b) Territories, not parts of States, which have been placed under the authority of the Commonwealth by Order in Council under section 122 of the Constitution. These are Papua and Norfolk Island.
- (c) Territories which have been placed under the administration of the Commonwealth by Mandate issued by the League of Nations. These are the Territory of New Guinea and (administered in conjunction with the British and New Zealand Governments) Nauru.

The Territories in class (a) only are parts of the Commonwealth.

2. **Forms of Executive Government.**—The Territories differ in their forms of Government. Papua is administered by a Lieutenant-Governor and a nominated Executive Council, who, except in matters of high policy and in certain matters prescribed by law, are not controlled by the Commonwealth Government; the Northern Territory, Norfolk Island, and the Territory of New Guinea are each under an Administrator who is controlled by the Commonwealth Government; in the Federal Capital Territory, some local institutions under the law of New South Wales continue, otherwise the Federal Capital Commission has definite responsibilities in regard to the government; in Nauru the Executive Government is vested in an Administrator who is subject only to the general control of the Government controlling the Administration.

3. **Legislative Power.**—The laws of the Parliament of the Commonwealth are in force in the Territories which are parts of the Commonwealth, but are not applicable to the Territories not parts of the Commonwealth unless expressly extended thereto.

In Papua, there is a nominated Legislative Council, which has full power of legislation, subject to the assent of the Governor-General. In New Guinea, the Northern Territory, Norfolk Island and the Federal Capital Territory, there are no Legislative Councils, and Ordinances are made for these Territories by the Governor-General, subject to such Acts of the Parliament of the Commonwealth as are in force there; but most of the Ordinances of the Northern Territory, Norfolk Island, and New Guinea give power to the Administrators to make any regulations necessary for giving effect to them.

In Nauru the legislative power is vested in the Administrator, subject to instructions from the Government controlling the Administration.

4. **Laws.**—In the Northern Territory, Papua and Norfolk Island, the laws existing at the date these territories came under the control of the Commonwealth have remained in force, subject to later legislation by or under the authority of the Commonwealth Parliament; in the Federal Capital Territory there still remain in force some of the laws of the State of New South Wales; in New Guinea, the former German law was repealed at the date of the establishment of civil government.

Three volumes containing the "Statute Law of the Territory of Papua" in force on 31st December, 1916, were published by the Government Printer, Port Moresby, in 1918 and 1919; subsequent Ordinances and the regulations under Acts and Ordinances are published in the *Government Gazette* of Papua and in annual volumes. The South Australian statutes in force in the Northern Territory will be found in the collected editions

and annual volumes of the State of South Australia : Ordinances made by the Governor-General are published in the *Commonwealth of Australia Gazette*, and regulations under Ordinances in the *Northern Territory Gazette*. The laws in force in Norfolk Island at the time of its coming under the control of the Commonwealth were collected in the *New South Wales Government Gazette* of 24th December, 1913, and printed separately as "The Consolidated Laws of Norfolk Island"; Ordinances made by the Governor-General, and regulations made by the Administrator, are published in the *Commonwealth of Australia Gazette*. Ordinances made by the Governor-General for the Federal Capital Territory are published in the *Commonwealth of Australia Gazette*. Ordinances made by the Governor-General for the Territory of New Guinea are published in the *Commonwealth of Australia Gazette*, and Regulations made by the Administrator in the *New Guinea Gazette*; the statute law in force in New Guinea on 31st December, 1922, has been published as Vols. I.-III. of "Laws of the Territory of New Guinea," and subsequent Ordinances and regulations will be collected in annual volumes. Ordinances made by the Administrator of Nauru are promulgated locally and are printed in the annual report to the League of Nations on the Administration of Nauru.

5. **Finances.**—Papua is autonomous in its finances, but receives an annual grant from the Commonwealth Government. The Administration of the Northern Territory is maintained by the Commonwealth Government; a grant is made towards the expenses of administration of Norfolk Island, but taxes are raised locally which meet part of the expenditure; expenditure in the Federal Capital Territory is defrayed by the Commonwealth; New Guinea has its own budget, and the local revenues have hitherto been sufficient to maintain the Administration; Nauru is self-supporting.

The sum expended by the Commonwealth Parliament in 1923-24 for the Territories outside the Commonwealth was £82,639, exclusive of £52,953 for mail services to these Territories and to other islands in the Pacific.

B. THE NORTHERN TERRITORY.

§ 1. Area and Population.

1. **Introductory.**—Upon the extension of New South Wales westward to the 129th meridian in 1827, the Northern Territory was incorporated in that colony (see Chapter I.), and in 1863 was annexed by Royal Letters Patent to the province of South Australia. With the adjacent islands, it was transferred to the Commonwealth on 1st January, 1911.

2. **Area and Boundaries.**—The total area of the Territory is 523,620 square miles, or 335,116,800 acres. Its length from north to south is about 900 miles, while its breadth from east to west is 560 miles. Its eastern boundary, dividing it from Queensland, is the 138th meridian of east longitude; and its western boundary, separating it from Western Australia, the 129th meridian. Its southern boundary is the 26th parallel of south latitude, dividing it from South Australia. The northern boundary is the coast line of those parts of the Indian Ocean known as the Timor and Arafura Seas. Near the mouth of the Wentworth River, in the Gulf of Carpentaria, the coast line is met by the eastern boundary; at Cape Domett, near Cambridge Gulf, the western boundary cuts the northern coast line. The length of coast line is about 1,040 miles, or 503 square miles of area to one mile of coast line; an exact survey has, however, not yet been made.

3. **Population.**—(i) *Europeans.* The problem of increasing the European population of the Northern Territory is one of considerable difficulty. Its solution will, of course, depend on the economic development of the country, and past experience tends to show that the task of developing its resources will involve large expenditure. At the Census taken in 1881 there were only 670 Europeans in the Territory. The total increased slowly, reaching its maximum in 1919 with 3,767 persons. Owing mainly to the closing down of the meat works at Darwin a decline then took place, and at the Census taken in 1921 the white population had decreased to 2,459, while at the end of 1924 it was approximately 2,250. During the financial year 1923-24 the number of births exceeded that of deaths by 15; but simultaneously the number of departures by sea exceeded that of arrivals by 24.

(ii) *Asiatics.* With the exception of a few Japanese, Filipinos and others, the Asiatics in the Northern Territory consist mainly of Chinese. The South Australian Government

introduced 200 Chinese in the early seventies to assist in the promotion of agriculture, while the discovery of gold resulted in many others coming on their own account. Their numbers increased considerably in connexion with the construction of the railway from Darwin to Pine Creek, in 1887–88, and there were at that time upwards of 4,000 Chinese in the Territory. The total gradually dwindled thereafter, and the number at the Census of 1921 was only 722. The total number of all non-European persons (excluding Aborigines), is approximately 1,020.

(iii) *Total Population.* The highest recorded population of all races, except aborigines, was 7,533 in 1888, at the end of 1924 it was 3,597. The estimated population for the last five years is given in the following table:—

**NORTHERN TERRITORY.—POPULATION (EXCLUSIVE OF ABORIGINES),
1920 TO 1924.**

Year ended 31st December—				Males.	Females.	Total.
1920	..	..	..	2,911	1,078	3,989
1921	..	..	..	2,718	1,016	3,734
1922	..	..	..	2,540	1,011	3,551
1923	..	..	..	2,527	1,028	3,555
1924	..	..	..	2,538	1,059	3,597

The Census population (4th April, 1921) was 2,821 males, 1,046 females, total, 3,867.

(iv) *Movement of Population.* The following is a summary of movement of population in 1924 (excluding overland migration):—

NORTHERN TERRITORY.—MOVEMENT OF POPULATION, 1924.

Inwards ..	..	496	Outwards ..	..	467	Excess of immigration over emigration ..	29
Births ..	..	57	Deaths ..	..	44	Excess of births over deaths ..	13
Increase ..	..	553	Decrease ..	..	511	Net increase ..	42

The immigration and emigration of the Territory for the five years ending in 1924 are shown in the following table:—

NORTHERN TERRITORY.—MIGRATION, 1919 TO 1924.

Year.				Immigration.	Emigration.
1920	..	..	..	606	1,161
1921	..	..	..	516	770
1922	..	..	..	406	599
1923	..	..	..	438	468
1924	..	..	..	496	467

(v) *The Aborigines.* A special article contributed by Dr. W. Ramsay-Smith on the subject of the Australian aborigines, was incorporated in Year Book No. 3 (pp. 158–176). It deals with such matters as theories of origin, physical characteristics, manners, customs, religion, &c. The chapter "Population," in Year Book No. 17, contained information regarding (a) the efforts made from time to time, in the various colonies, to arrive at the number and distribution of aborigines; (b) their approximate number at the taking of the Census in 1921, and (c) measures taken by the States (in the case of the Northern Territory, by the Commonwealth) to protect and preserve the aborigines. In the Northern Territory large numbers of the aborigines are still outside the influence

of Europeans. At the last Census, 2,050 full-blood aborigines, in the employ of whites or living in the vicinity of European settlements, were enumerated. Of these 1,184 were males and 866 females. The total number of aborigines in the Territory at 30th June, 1924, was estimated at 20,700. The greatest difficulty which confronts the Administration in dealing with the natives is due to the circumstance that they are nomads, without fixed abode, merely wandering about hunting for native food within the limits of their tribal boundaries, and making no attempt at cultivation or other settled industry. In their natural state, compared with those of other tropical countries, the natives are very healthy, but in contact with new settlers, white or Chinese, they rapidly fall victims to disease, and to degradation from drink or opium.

§ 2. Legislation and Administration.

1. *Transfer to Commonwealth.*—(i) *The Northern Territory Acceptance Act.* A short historical sketch is given in Year Book No. 6, pp. 1113-4. On 1st January, 1911, the Territory was transferred by South Australia to the Commonwealth, upon terms previously agreed upon by the respective Cabinets, and ratified by the Commonwealth *Northern Territory Acceptance Act* (No. 20 of 1910). The terms were outlined in Official Year Book No. 15, page 940.

(ii) *The South Australian Surrender Act.* The State Act approved and ratified the agreement surrendering the Territory.

(iii) *The Northern Territory (Administration) Act 1910.* The Act provides for the appointment of an Administrator and officials. South Australian laws are declared to continue in force as laws of the Territory, and certain Commonwealth Acts to apply. Power is given to the Governor-General to make Ordinances having the force of law.

2. *Administration.*—A Resident Administrator, vested with supreme authority in internal affairs, was appointed in the Department of the Minister for External Affairs in February, 1912. The following Departments of the Public Service, however, are removed from his control and supervision:—Railways, Posts and Telegraphs, Customs, Taxation, Public Works, and Quarantine. The Railways are controlled by the Commonwealth Railway Commissioner at Melbourne, Posts and Telegraphs by the Deputy Postmaster-General at Adelaide, Customs by the Collector of Customs at Brisbane, Taxation by the Taxation Department at Melbourne, Public Works by the Works and Railways Department, Melbourne, and Quarantine by the Director-General of Health for the Commonwealth, Melbourne.

3. *Northern Territory Ordinances.*—The main provisions of the Ordinances passed are as follows:—The powers and duties of the Administrator vested in the appointee, include custody of the public seal, appointment and suspension of officials, and execution of leases of Crown lands. A Supreme Court with original and appellate jurisdiction is instituted, the method of appointment of the Judge is prescribed, and provision is made for trial by jury, and for the registration and summoning of jurors. A Sheriff, a Registrar-General, and a Health Officer are provided for, also the registration of births, marriages and deaths, and of deeds and documents. Custody and control of aborigines, with extensive powers of supervision, are vested in the Chief Protector. Provision is made for the control of fisheries. Birds protected during the whole or part of the year are scheduled. Crown lands are classified, and their mode of acquisition, entry and holding defined. The prevention and eradication of diseases in plants have been provided for. Under the Stock Diseases Ordinance the Chief Inspector of Stock has wide powers in regard to the movements of stock, prevention and control of diseases, etc. A town council has been constituted for Darwin, and provision made for assessments, rates, etc. Mining is encouraged by the provision of rewards for the invention of new processes and the discovery of valuable deposits and of new mineral fields; subsidization of the industry and the issue of prospecting licences are also provided for. Licences to search for mineral oil, and leases for working, are available. A Board is constituted for the purpose of making advances to settlers who intend to improve and stock their holdings, to purchase farm implements, plant, etc., or to pay off mortgages, the rate of interest and terms of repayment being set out. Advances in aid of the erection of workmen's dwellings have also been provided for. A Council of Advice has been provided for, consisting of a chairman and seven members—four being non-official. Provision has

been made for the compensation of injured workers, for controlling the sale, etc., of necessary commodities, for the appointment of a public trustee, and for amendment of the "Taxation Act 1884" of South Australia in its application to the Territory. A new Land Ordinance was passed in May, 1923, which repealed the then existing Ordinances. Reference to this Ordinance is made in Chapter V.—Land Tenure and Settlement. Reference to the Liquor Ordinance was made in Year Book No. 16, p. 640. For Ordinances passed in 1924 see § 6, Chapter III.

4. Representation in Commonwealth Parliament.—Section 122 of the Commonwealth Constitution provides that "the Parliament may make laws for the government of any territory . . . and may allow the representation of such territory in either House of the Parliament to the extent and on the terms which it thinks fit." In pursuance of this provision an Act was passed in 1922 whereby the Northern Territory elects a member to the House of Representatives. As this member represents a very small number of electors, he is not entitled to vote, but may take part in any debate in the House.

§ 3. Physiography.

1. Tropical Nature of the Country.—The Territory is within the torrid zone, with the exception of a strip $2\frac{1}{2}$ degrees wide, which lies south of the Tropic of Capricorn.

2. Contour and Physical Characteristics.—The low flat coast line seldom reaches a height of 100 feet. Sandy beaches and mud flats, thickly fringed with mangroves, prevail. Sandstone, marl, and ironstone form the occasional cliffy headlands. The sea frontage of more than 1,000 miles is indented by bays and inlets, and intersected by numerous rivers, many of which are navigable for considerable distances from their estuaries.

The principal features of the coast line are enumerated in Year Book No. 1, p. 66; the rivers in Year Book No. 2, p. 76; the mountains in Year Book No. 3, p. 67; the lakes in Year Book No. 4, p. 77; the islands in Year Book No. 5, pp. 71, 72, and the mineral springs in Year Book No. 6, p. 65.

Inland, the country generally is destitute of conspicuous landmarks. From the coast there is a general rise southwards to the vicinity of the 17th or 18th parallel of south latitude, where the higher lands form the watershed between the rivers that flow northwards to the sea and those that form the scanty supply of the interior systems. Towards the centre of the continent the land over a wide area is of considerable elevation, and there are several mountain ranges, generally with an east and west trend.

§ 4. Climate, Fauna and Flora.

1. The Seasons.—There are two main climatic divisions—the wet season, November to April, and the dry season, May to October, with uniform and regular changes of weather. Nearly the whole of the rainfall occurs in the summer months. Fuller particulars will be found in Year Book No. 6, p. 1116.

2. Fauna.—The ordinary types of native Australian fauna inhabit the Territory. As elsewhere on the continent, the higher *Theria* are rare, but marsupials, birds, crocodiles, fresh-water tortoises, snakes (mostly non-venomous), and frogs abound. There are many varieties of freshwater fish and littoral mollusca. Butterflies and beetles are strongly represented. The white ant is a pest, anthills in the Territory sometimes attaining great dimensions. Mosquitoes and sandflies are very troublesome, particularly in the wet season. Native fauna are in some cases protected. The domesticated animals have been introduced, and buffalo formerly existed in large herds, but their numbers have been greatly reduced by indiscriminate shooting in recent years.

3. Flora.—The vegetation is North Australian in type, but a number of the forms belong to the Malayan and Oceanic regions. The timber trees are not of great commercial value, but in the coastal regions tropical vegetation grows luxuriantly to the water's edge. On the wide expanses of plain country in the interior there is little vegetation. The principal orders represented in the Territory are:—*Euphorbiaceæ*, *Compositæ*, *Convolvulaceæ*, *Rubiaceæ*, *Goodeniaceæ*, *Leguminosæ*, *Urticæ*.

Fuller particulars regarding fauna and flora are given in Year Book No. 6, pp. 1116–7.

§ 5. Production.

1. **Agriculture.**—Up to the present agriculture has made little progress in the Territory, although it has been proved that various industrial plants thrive. This is the case with rice, tobacco, coconuts, mangoes, cotton, various fodder plants and peanuts. Expense of harvesting is, at present, an obstacle to the economic production of rice, and until labour-saving machinery is procured it cannot be produced with profit. Tobacco has been successfully grown in small plots, but this crop needs skilled handling as regards planting and curing, and the position has so far not justified the employment of an expert. Some 5 miles from Darwin a coconut plantation, about six acres in area, is thriving, and at a small plantation at Shoal Bay the palms planted along the sea-shore are giving excellent results. There is a large stretch of first-class coconut land on the coast, but hitherto planting has not been attempted on a commercial scale. Cotton was planted in 1924 by settlers at Stapleton, Grove Hill, Daly Rivers, Pine Creek, and the Katherine, and there were experimental plots at Mataranka, Borroloola, and on the lower Roper River. The season, however, was unfavourable, owing to inadequate and badly distributed rainfall, and the year's crop amounted to only 7,000 lb. of seed cotton. The peanut crop also suffered from the unfavourable season, but results obtained in previous years show that several localities in the Territory are well suited for its cultivation. Fodder plants are not grown to any great extent. On the Katherine River experiments are being made with lucerne, and the results so far show that, with irrigation and good farming, this useful fodder plant may be established. A Primary Producers' Board, supported by the Government, was founded in 1923, with the object of relieving distressed settlers, and a small number of families have been settled on land suitable for agriculture.

2. **Pastoral Industry.**—The pastoral possibilities of certain parts of the Northern Territory were recognized at an early date, and in 1866 stock was brought into the Macdonnell Range country from South Australia. Six years later cattle were brought from Queensland to the northern parts of the Territory, and in 1879 Mr. Giles reached the Katherine River with 2,000 head of cattle and 12,000 sheep from South Australia. For various reasons sheep-raising did not succeed. It is, however, hoped that with a more regular supply of artesian and sub-artesian water, and the building of railways, parts of the Territory will become profitable sheep country. The cattle industry progressed slowly, and the number of cattle on 30th June, 1924, was about 843,700. A great impetus was given to this industry in 1917 by the opening of extensive meat works at Darwin. Unfortunately the works closed down in 1920, and the practice was resumed of over-landing surplus stock to neighbouring States. The number of cattle exported by land during the financial year 1923–24 was 76,510, compared with 48,939 during the previous year, and that of horses about 1,000. The cattle industry has been retarded by the ravages of ticks and by the difficulty of travelling stock through waterless country. These difficulties are, however, gradually being overcome, the former by the introduction of the practice of “dipping,” and the latter by adding to the number of artesian wells on the various stock-routes and the creation of stock reserves. Horses thrive well, and in 1924 there were about 44,600 horses in the Territory. Buffaloes thrive in the coastal districts, but their number has been greatly reduced through indiscriminate shooting for the sake of the hides, of which 2,261 were exported during 1923–24.

The estimated number of live stock in the Territory at various periods is given in the table hereunder :—

NORTHERN TERRITORY.—LIVE STOCK, 1910, 1915, AND 1921 TO 1923.

Year.	Horses.	Cattle.	Sheep.	Pigs.	Goats.	Camels.
1910	24,509	513,383	57,240	996	..	..
1915	19,957	483,961	57,827	500	..	..
1921	39,565	568,031	6,349	452	19,335	494
1922	39,845	760,766	6,161	361	18,086	470
1923	44,603	843,718	4,728	647	25,647	579

3. *Mining.*—(i) *General.* Alluvial gold-digging in the Northern Territory commenced in 1869, and up to the end of 1880 gold to the value of £79,022 had been produced. In 1881 the gold production reached its maximum, the value for that year being £111,945. During the following years it fluctuated considerably, but as long as the alluvial fields lasted the output was satisfactory. In the transition period from alluvial to reef mining the industry declined considerably, and the output dwindled from year to year, reaching its lowest ebb in 1921–22, when the value amounted to only £540. The production of metals other than gold has suffered from vagaries of prices, and from the disadvantages of high cost of transport and of white labour. The year 1923–24 showed an improvement in regard to the production of gold, but there was a falling off in the yield of tin. Gold-mining was carried on chiefly at Fletcher's Gully, and tin at Marranboy. The number of gold-mining leases in existence on 30th June, 1924, was 29, comprising an area of 958 acres, and 36 mineral leases for 1,380 acres.

(ii) *Mineral Production.* The following table shows the total mineral production for the last five years.

NORTHERN TERRITORY.—VALUE OF MINERAL PRODUCTION, 1919–20 TO 1923–24.

Year.	Gold.	Tin Ore.	Wolfram.	Silver-Lead Ore.	Copper Ore.	Mica.	Total Value all Minerals.
	£	£	£	£	£	£	£
1919–20	5,282	27,610	45,648	299	780	482	80,101
1920–21	1,299	7,793	9,752	..	..	159	19,003
1921–22	540	5,891	560	..	798	2,170	9,959
1922–23	743	13,887	18	..	30	1,926	16,612
1923–24	2,988	12,855	..	..	239	2,718	18,856

(iii) *Coal and Mineral Oil.* At the end of 1922–23 there were in force 205 licences to search for coal and mineral oil, but, as they were in the main held for speculative purposes, the majority were forfeited owing to non-payment of rent. Licences existing at 30th June, 1924, numbered 55, covering an area of 17,779 square miles. Prospecting so far has been confined to boring undertaken by a company at Elcho Island.

4. *Pearl, Trepang, and Other Fisheries.*—In 1884 mother-of-pearl shell was discovered in the harbour of Port Darwin. Difficulty in working, principally through heavy tides and muddy water, retarded the development of the industry for many years. Subsequently, however, the opening up of new patches led to a revival, but the outbreak of war gave the industry a setback, owing to the limited demand in the home markets. During 1923–24 31 cwt. of pearl shell were exported to the United Kingdom. The territorial waters teem with marketable fish, and, despite inadequate transport facilities, a commencement has been made with a trade in fish, dried or otherwise preserved, and exports to the value of £3,381 were forwarded to British Malaya and China in 1923–24.

§ 6. Land Tenure.

A description of the system of land tenure in force in the Territory will be found in Chapter V.—Land Tenure and Settlement.

§ 7. Commerce and Shipping.

1. *Trade*.—No record is kept of the direction of trade between the Commonwealth States and Territories. The value of the direct oversea trade for 1901 and for each of the years 1919–20 to 1923–24 is given hereunder :—

NORTHERN TERRITORY.—VALUE OF DIRECT OVERSEA TRADE, 1901 AND 1919–20 TO 1923–24.

Items.	1901.	1919–20.	1920–21.	1921–22.	1922–23.	1923–24.
	£	£	£	£	£	£
Imports	37,539	29,056	19,857	12,115	12,804	14,432
Exports	29,191	277,627	14,752	5,036	14,627	8,000
Total	66,730	306,683	34,609	17,151	27,431	22,432

The principal items of oversea export in 1923–24 were smoked and dried fish, £3,381, cattle £2,615, and hides £1,266. The comparatively large figures for the year 1919–20 were due to the export of products from the meat works at Darwin. Since the closing of these works in 1920 most of the surplus stock of cattle has, as previously stated, been overlanded to neighbouring States.

2. *Shipping*.—The Territory is dependent for its shipping facilities chiefly on the services of vessels trading between Sydney and Singapore. Other vessels make occasional visits, while a sixty-days' service between Fremantle and Darwin is carried out by the "Bambra," belonging to the West Australian State Shipping Service.

NORTHERN TERRITORY.—SHIPPING, 1919–20 TO 1923–24.

Period.	Arrivals.		Departures.	
	No. of Vessels.	Tonnage.	No. of Vessels.	Tonnage.
1919–20	41	83,086	43	83,264
1920–21	30	65,301	30	65,398
1921–22	32	93,421	30	84,835
1922–23	37	99,955	37	99,955
1923–24	35	96,099	34	96,004

The foregoing figures are exclusive of particulars of coastwise shipping. During 1923–24, 38 vessels of 613 tons net were entered as coastwise.

§ 8. Internal Communication.

1. *Railways*.—Under the agreement ratified by the Act, the Commonwealth is to construct the Northern Territory portion of the transcontinental railway line (connecting Adelaide and Darwin, via Port Augusta).

The Northern line from Adelaide terminates at Oodnadatta, about 100 miles south of the southern boundary of the Territory. The only line at present in the Territory is one from Darwin to Emungalan, Katherine River, a length of 198.68 miles, of 3 ft. 6 in. gauge. The line to connect Katherine River with Oodnadatta (about 1,012 miles) has been surveyed, the greater part of the survey being exploratory in character. The construction of the section between Emungalan and Daly Waters has been authorized by the Commonwealth Government at a cost not to exceed £1,545,000. It is hoped that the railway bridge across the Katherine River will be completed in 1925, when the section referred to will be laid down. The completion of the remainder of the gap would permit

of the development of the broad belts of pastoral and mineral country towards the centre of Australia. The Commonwealth also acquired on 1st January, 1911, the property in the line from Port Augusta to Oodnadatta (478 miles).

2. **Posts.**—Postal communication is maintained by vessels belonging to Burns, Philp and Co., which maintain a monthly service between the Territory and the Eastern States. In addition, the vessels belonging to the State Steamship Service of Western Australia give a service once every 60 days between Fremantle and Darwin. Inland, the northern part of the Territory receives its mail via Darwin, while the southern districts are served via Adelaide.

3. **Telegraphs.**—The transcontinental telegraph line, covering a length of 2,230 miles, was completed on the 22nd August, 1872, at a cost of nearly half-a-million sterling. The line runs in a northerly direction from Adelaide to Darwin, whence telegraphic communication is provided with Asia and Europe, via Banjoewangie (Java), Singapore, and Madras. Between Darwin and Banjoewangie the submarine cable is duplicated.

High-power wireless stations are under construction by the Federal Government at Wave Hill, in the Territory, and at Camooweal, just over the eastern boundary, in Queensland.

§ 9. Finance.

1. **Revenue and Expenditure, 1923-24.**—In the Commonwealth finance statements separate accounts are given for Northern Territory administration. The following shows the receipts and expenditure for the financial year :—

REVENUE AND EXPENDITURE.—NORTHERN TERRITORY, 1923-24.

REVENUE.	£	EXPENDITURE.	£
Customs and Excise ..	5,028	Salaries and Contingencies ..	113,078
Postal, Telegraph, and Telephone ..	7,081	Northern Territory Railways	31,280
Darwin-Katherine River Railway ..	16,461	Melbourne Administrative Services ..	3,737
Territorial ..	18,954	Interest and Sinking Fund, Northern Territory Loans ..	114,276
Land and Income Tax ..	3,051	New Works, Artesian Bores, Roads, etc. ..	15,432
Quarantine ..	85	Miscellaneous, Maintenance, and Repairs ..	25,331
Lighthouses and Light Dues ..	58		
Stamp Duties ..	584		
Miscellaneous ..	8,070		
Deficiency on year's transactions ..	243,762		
Total ..	303,134	Total ..	303,134

2. **Northern Territory Debt.**—The items making up the total debt of the Territory as at 30th June, 1924, are as follows :—

	£	£
Debt at date of transfer to the Commonwealth, 1st January, 1911 ..	..	3,931,086
Redeemed under Commonwealth Loan Acts ..	1,261,617	1,722,367
Redeemed from Consolidated Revenue ..	460,625	
Redeemed from Sinking Fund ..	125	
Balance, 30th June, 1924 ..	..	2,208,719

In addition, the balance of the Port Augusta-Oodnadatta Railway Loans taken over from South Australia amounted at the same date to £1,670,432, making a total of £3,879,151. Under the provisions of the "Northern Territory Acceptance Act 1910" a sinking fund has been established in connexion with the transferred loans.

C. THE FEDERAL CAPITAL TERRITORY.

1. **Introductory.**—In Year Books Nos. 4 and 5, information was given in Section XXXI. as to the events leading to the selection of the Federal Capital Territory, and as to the necessary legislation and the progress of operations in connexion with the establishment of the capital city. The physiography of the Territory was dealt with *in extenso*, and topographical and contour maps accompanied the letterpress, as well as reproductions of the premiated designs for the laying out of the city. Considerations of space, however, preclude the repetition of this information. On the 12th March, 1913, the official ceremony to mark the initiation of operations in connexion with the establishment of the Seat of Government was carried out. At this ceremony the selection of "Canberra" as the name of the capital city was announced.

2. **Administration.**—For some years after the inception of activities, both the administration of the Territory and the construction of the City were entrusted to the Department of Home Affairs. In November, 1916, owing to a re-arrangement of responsibilities, two Departments became concerned in Federal Capital matters—the Department of Home and Territories taking over the administration of local government, lands, and similar matters; and the Department of Works and Railways assuming control of constructional development. This joint administration continued until the end of 1924.

In the early part of 1921, "with a view to enabling the Federal Parliament to meet, and the Central Administration of the Commonwealth Government to be carried on as soon as practicable at Canberra," an Advisory Committee of five members—consisting of architectural and engineering experts—was appointed under the control of the Minister for Works and Railways to submit a scheme for the progressive construction of the City. Its main proposals were accepted, and the controlling departments were guided by its recommendations until the expiration of their period of control.

In July, 1923, the ninth Parliament—whose triennial period would expire early in 1926—resolved that "His Excellency the Governor-General be respectfully requested to summon the first meeting of the tenth Parliament at Canberra." To expedite development sufficiently to enable that resolution to be given effect to, the Director-General of Works—who was a member of the Advisory Committee—was transferred from Melbourne to Canberra to exercise his personal supervision over the progress of construction.

In 1924, deciding that development generally had advanced sufficiently to require the constitution of an independent Commission to control the Territory, Parliament passed the 'Seat of Government (Administration) Act.' A Commission of three members—

J. H. Butters, Esq., C.M.G., M.B.E. (Chairman):

Sir John Harrison, K.B.E.: and

C. H. Gorman, Esq.:

was thereupon appointed, and assumed control on 1st January, 1925.

The powers and responsibilities of the Commission include the control and management of lands, the carrying out of works and building construction, and, generally, the municipal government of the Territory. Subject to Parliamentary and Ministerial authority, it has been empowered to raise loans for all the purposes of its administration.

The Departmental association with the administration of the Territory has therefore become limited to the general authority of the Minister for Home and Territories, and responsibility of the Department of Works and Railways to assist when required in the designing and construction of works and buildings.

The services of the Advisory Committee were retained until 30th June, 1925.

3. **Progress of Work.**—After an International Competition, a design for the layout of the Capital City was approved, and steps were taken to commence its construction in accordance therewith.

A survey of the main axial lines was carried out, areas for initial development were subdivided, and a scheme for impounding water on the Cotter River was completed. The construction of an outfall sewer was put in hand, the formation of the principal avenues was begun, and a power house was built and equipped in order that electricity might be transmitted to all activities connected with construction. An Afforestation Branch was established, which made exhaustive experiments in regard to suitable trees for street, park, and forest planting.

In 1916 activities were greatly curtailed owing to the Great War, and development was practically suspended until 1920.

After the appointment of the Advisory Committee in 1921 construction work was resumed in accordance with its general scheme, which provided that—owing to the change in the economic position, as a result of the War—works of a monumental and ornamental character be deferred, and that Parliament House and other buildings be of a provisional character.

Works were carried on in conformity with this programme until the Federal Capital Commission took control on the 1st January, 1925.

The Commission has continued the policy of developing the city according to the approved plan, devoting itself primarily to the completion of the basic engineering services and the official and residential accommodation necessary to enable the Seat of Government to be transferred during 1926.

The construction of main avenues and roads according to the approved plan is proceeding. Many miles have been formed, and a considerable portion metalled or gravelled. Surface treatment has been undertaken on certain arterial roads in the city area.

Residential areas are being laid out, and engineering services such as roads, sewerage, drainage, and water supply from the Cotter scheme, are being provided. The water supply and sewerage are being so arranged as to connect up with the main city services when completed. Water supply service reservoirs have been provided on Red Hill and Mount Russell, and mains through the city are being laid as required. The outfall sewer is completed, and the main intercepting sewers within the city boundary are under construction. Sewage treatment works are also being constructed at the outfall. Storm-water channels have been provided below Mount Ainslie and Red Hill to protect the adjacent residential areas. Electric lighting and power services have been extended to serve the residential districts and areas where various construction works are proceeding, many miles of transmission line having been erected. Fire services have been provided for the protection of buildings and depots. Several bridges have been constructed, the most important being across the Murrumbidgee River, near its junction with the Cotter, and across the Molonglo River in the city area, establishing connexion between the north and south sides of the city. The capacity of the power house is 1,350 kilowatts, and electrical energy is conveyed to the various factories where the manufacture of bricks, tiles, joinery, cement products, and other requirements is carried on.

Excavation of the site for the Provisional Parliament House was commenced towards the end of 1923, and the actual construction was begun in January, 1924. Satisfactory progress is being maintained with the object of its completion about the middle of 1926.

A departure from the scheme prepared by the Advisory Committee was approved in the case of offices for the Administrative Departments, a permanent building being decided upon instead of a group of structures of a provisional nature. As a result of an architectural competition a design has been selected for this building, and the project is now under the consideration of the Parliamentary Standing Committee on Public Works. As its completion before 1930 is not practicable a smaller building is being erected to house the sectional staffs of the various Departments which will be necessary at Canberra for the satisfactory functioning of Parliament.

A Government Printing Office, and accommodation for an Automatic Telephone Exchange are also being provided.

The temporary buildings provided at Acton in 1913 as Administrative Offices have been enlarged for the purposes of the Commission.

Proposals being developed include the provision of accommodation for the National Library, and other works and services necessary to enable all Departments of the Public Service to function primarily from Canberra as soon as possible after the transfer of the Seat of Government.

Accommodation for visitors has been provided by the erection of two hotels (Hotel Canberra and Hotel Ainslie). The former, which is situated near the Governmental Area, has accommodation for 200 guests; the latter can accommodate 80 persons. A third hotel is now in course of construction, and is due for completion in May, 1926; and a proposal to erect a fourth hotel has now received approval.

The provision of other residential accommodation is increasing in the various localities. Over 100 cottages have been constructed—mostly of brick—and the provision of an additional 150 is being undertaken.

As the result of the first auction sale of building leases—held in December, 1924—the construction of buildings for residential and shopping purposes has been undertaken by private enterprise.

The problem of accommodation for workmen during the period of initial construction has been met, to a certain extent, by the provision of approximately 150 portable wooden cottages in areas adjacent to the sites of the main building operations. About 100 houses of a more permanent character are shortly to be constructed, forming a Garden Suburb. Single men are accommodated in masses and camps.

Quarries to supply road-making and building material have been established; plant has been purchased for the manufacture of materials, road and sewer construction transport, etc.; and a light railway has been laid to facilitate the carriage of material and plant from stores, depots and brickworks to the various localities.

The survey work involved in land subdivision, road location, siting of buildings, and engineering works, has been carried out and is still in active progress.

Belts of trees for shelter, and various city parks have been planted, and the formation of avenues and streets and other ornamental features has been carried out, as well as a large amount of afforestation work on the outskirts of the city. Work in this direction is still proceeding concurrently with the formation of roads and the development of the various areas.

Provision has been made for the maintenance of roads, buildings, and other services in the Territory, and many works and buildings of a minor character have been constructed.

4. Lands.—(i) *In the Federal Capital Territory Proper.* Reference has been made in Chapter V. to the general conditions of land tenure in the Territory for the Seat of Government and to the area of alienated and leased land.

As considerable portions of the Territory lands are not required in connexion with the establishment of the City, large areas have been leased. These leases contain special conditions in regard to the extermination of weeds, and rabbits and other noxious animals. The lands are classified into three grades of agriculture and three grades of grazing lands. About 48,000 acres of these lands are at present leased to returned soldiers for periods varying from 5 to 25 years.

An important step was taken in regard to the land policy of the Territory when the first auction sale of City leaseholds was held on the 12th December, 1924, and 289 residential and 104 business sites were offered at Eastlake, Manuka Circle, Blandfordia, Red Hill, Civic Centre, and Ainslie.

Of these, 147 were immediately disposed of at prices representing in values from £6 to £58 per foot for business sites, and from 10s. to £3 4s. per foot for residential sites.

During the six months following the sale, an additional 35 blocks were leased, all the business sites being disposed of. Under the terms of the City Leases Ordinance each block is leased for a period of 99 years at a rental equivalent to 5 per cent. per annum of the unimproved capital value, as assessed by the Commission or bid at auction. The terms of the lease require the purchaser to commence the erection of a building on the site within two (2) years, and to complete it within three (3) years from the date of purchase.

Designs for the buildings are governed by regulations, and leases are not transferable until buildings have been erected on the land as prescribed.

(ii) *Land at Jervis Bay.* The Commonwealth has acquired from the State of New South Wales sovereign rights over an area comprising about 28 square miles of land and water at Jervis Bay for possible use as a port in connexion with the Federal Capital. The Royal Australian Naval College has been established in this area on a site known as Captain's Point, and portions of the remaining lands have been leased.

5. Railways.—Canberra is connected with the railway system of New South Wales by a line 4½ miles long to Queanbeyan. This was opened for goods traffic on the 25th May, 1914, and for passenger traffic on the 15th October, 1923, and is being worked by the New South Wales Railway Commissioners for and on behalf of the Commonwealth.

A public railway station has been established at Eastlake near the Power House, and is the terminus of the existing line. An extension to the Civic Centre (2½ miles) was constructed, and was temporarily in use, but the destruction of a bridge over the Molonglo River prevents its use at present.

A daily passenger and goods service is in operation from Queanbeyan to Canberra, and special sidings have been constructed for use by contractors. At Molonglo Settlement, where many employees of the Commission are housed, a two-carriage platform has been constructed.

Extensions of the railway for constructional purposes have been made into various areas in the City, and these are used solely for the carriage of bricks and other heavy materials.

A trial survey of the Canberra-Jervis Bay line has been completed, and plans have been prepared to enable an estimate of the cost of the line to be obtained.

Under the provisions of the Seat of Government Surrender Act 1909 of New South Wales, and the Seat of Government Acceptance Act 1909 of the Commonwealth, an agreement exists between the Commonwealth and the State of New South Wales in relation to the construction of a railway from Canberra to Yass—a distance of, approximately, 43 miles, of which about 32 miles extend through New South Wales. The State is required to construct its portion of the line as soon as the Commonwealth builds a line to the boundary of the Territory.

The permanent survey of this line has been completed, and the proposal has recently been the subject of an enquiry by the Commonwealth Public Works Committee, whose report thereon is now under consideration.

6. Population and Live Stock.—The estimated population on the 31st March, 1925, was 4,449. The live stock, according to the latest return, comprises:—Horses, 1,433; cattle, 6,085; sheep, 132,400; pigs, 434.

7. Educational Facilities.—Arrangements have been made with the New South Wales Education Department to continue for the time being the administration of education in the Territory, the expenditure involved being refunded annually by the Commission to the State. Including the school at Jervis Bay, there are thirteen schools in operation.

The policy has been adopted of concentrating a number of scholars in a large central school where better facilities and a more efficient staff may be obtained than would be possible in small isolated schools each under the control of one teacher. The main Public School at Telopea Park now has accommodation for 500 scholars, and its curriculum covers the stages from the primary to school-leaving standard. The Commission transports scholars to this school from the various centres.

The Commission is at present considering the question of development of Secondary Schools by private enterprise, and the provision of a High School and Technical College.

8. Expenditure.—(i.) *General.* The capital expenditure on the Seat of Government during the period 1901-11 and in each year thereafter up to the 30th June, 1924, is set out in detail in the appended table:—

FEDERAL CAPITAL TERRITORY.—CAPITAL EXPENDITURE TO 30th JUNE, 1924.

Period.	Expenditure.						Total.
	Choosing Site.	Land Acquisition within Territory.	Land Acquisition outside Territory.	Queanbeyan to Canberra Railway.	Extension of Railway from Power House to Civic Centre.	Construction of Capital.	
	£	£	£	£	£	£	£
1901-11 ..	22,915	..	..	..	..	16,413	39,328
1911-12	68,026	68,026
1912-13	179,525	..	12,575	..	124,718	316,818
1913-14	180,488	..	30,605	..	221,028	432,121
1914-15	36,770	2,850	2,926	..	210,607	253,153
1915-16	127,537	295	995	..	167,384	296,211
1916-17	112,120	8,865	17	15,134	101,533	237,669
1917-18	90,419	285	763	3,497	4,233	99,197
1918-19	1,323	72	241	919	936	3,491
1919-20	11,968	..	20	Cr. 72	3,575	15,491
1920-21	1,816	..	..	4,189	78,489	84,494
1921-22	8,861	..	..	Cr. 20	140,075	148,916
1922-23	1,475	..	200	956	332,694	335,325
1923-24	1,442	..	..	..	437,350	438,792
Total ..	22,915	753,744	12,367	48,342	24,603	1,907,061	2,769,032

(ii) *Details.* Details of expenditure in connexion with the building of the Federal Capital are given hereunder for the latest three years available :—

FEDERAL CAPITAL.—EXPENDITURE ON CONSTRUCTION, 1922 TO 1924.

Particulars.	1921-22.		1922-23.		1923-24.	
	£	£	£	£	£	£
Buildings—						
Parliament House	8		42,420	
Hostels	215	13,620		62,914	
Cottages	34,741	16,488		47,584	
Primary Schools	6,447		2,817	
		34,956		36,563		155,735
Water Supply and Sewerage—						
Water Supply	4,810	46,724		23,960	
Sewerage	21,164	64,729		121,307	
Intercepting Channels	2,989	7,023		680	
		28,963		118,476		145,947
Roads and Bridges—						
Roads	21,059	75,993		48,832	
Bridges	11	4,207		17,479	
		21,070		80,200		66,311
Railways		395		837		5,390
Electric Light and Power (Power House and Mains)		4,354		6,205		5,199
Tree Planting		2,447		4,832		6,421
Miscellaneous Minor Works		1,445		4,181		12,646
Miscellaneous—						
Manufacturing and Trading Accounts	28,338	11,259 <i>Cr.</i>		8,765	
Suspense Account	1,543 <i>Cr.</i>	54,710		1,532 <i>Cr.</i>	
Plant	11,644	32,099		27,784	
Miscellaneous	7,514	5,850		4,684	
Incidental Works	492	..		..
		46,445		81,400		39,701
Total		140,075		332,694		437,350

9. **Revenue.**—The revenue of the Federal Capital Territory for the year ended 30th June, 1924, was £81,767.

10. **Military College.**—In June, 1911, a Military College was opened at Duntroon for occupation by the cadets and staff. Particulars regarding the establishment of this College may be found in Year Book No. 4 (p. 1159). Previous reference has been made to it in Chapter XIV. dealing with Defence.

11. **Naval College at Jervis Bay.**—See Chapter XIV. dealing with Defence.

D. NORFOLK ISLAND.

1. **Area, Location, etc.**—Norfolk Island, discovered by Captain Cook in 1774, is situated in latitude 29° 3' 45" south, longitude 167° 58' 6" east. Its total area is 8,528 acres, the island being about 5 miles long and 3 miles wide. From Sydney it is distant 930 miles, and from New Zealand 400 miles. The coast line is 20 miles, and its form

that of an irregular ellipse. Except on the south-west, inaccessible cliffs rise from the water's edge. The climate is equable, the temperature ranging between 56° and 82°, with a mean of 68°. The average annual rainfall is 55 inches. It has been said that the salubrious climate, coupled with the beauty of its land and sea scapes, should combine to render Norfolk Island "the Madeira of the Pacific." At present the island is visited annually by a fair number of tourists, but with improved shipping facilities the traffic would undoubtedly increase.

2. **Settlement.**—The first colonization, in 1788, was by Lieutenant King, who in *H.M.S. Sirius* established a small penal station as a branch settlement of that at Port Jackson. The settlement was abandoned in 1813, and for 13 years thereafter its chief use was as a whaling station and place of call for British warships.

From 1826 to 1855 it was again made a penal station. In 1844 it was annexed to Van Diemen's Land (Tasmania).

The descendants of the *Bounty* mutineers, having become too numerous to subsist on Pitcairn Island, were removed thence to Norfolk Island in 1856. The new community numbered 193—94 males and 99 females—and were the descendants of British sailors and Tahitian women.

3. **Administration.**—In 1856 the island was severed from Tasmania, and created a distinct and separate settlement under the jurisdiction of New South Wales. In 1896 it was made a dependency under the Governor of that Colony, and was administered by the Chief Secretary's Department through a resident Chief Magistrate, in whom was vested the executive government of the settlement, and the supervision of its penal affairs. In 1913, however, a Bill was passed by the Federal Parliament providing for the taking over of the island as a territory of the Commonwealth. The Act came into force on the 1st July, 1914, and the island is now administered by the Department of Home and Territories, Melbourne, through an Administrator and Chief Magistrate. There is an Advisory Council, consisting of twelve members, presided over by the Administrator. Six of the members are elected by the residents, and six are nominated by the Administrator. The powers and duties of the Council were laid down in Ordinance No. 2 of 1925. According to this Ordinance the Executive Council has the oversight of public roads and reserves, etc. It may transmit to the Administrator for submission to the Minister proposals for new Ordinances or for the repeal or amendment of existing ones, and it may make by-laws in connexion with local matters.

4. **Population.**—The population on 30th June, 1924, was 349 males and 377 females, a total of 726. There were 188 householders on the island. In the year 1923—24, 8 births, 3 deaths, and 2 marriages were recorded.

5. **Live Stock.**—The latest returns of live stock show that there are on the island 1,715 cattle, 617 horses, 223 sheep, and 178 pigs. In addition, there are 5,548 head of poultry.

6. **Production, Trade, etc.**—The soil throughout is rich, and is specially suitable for the cultivation of citrus fruits, bananas, and (in parts) coffee. Various other sub-tropical fruits thrive well. During 1923—24, the production of oranges was 40,000 bushels; bananas, 275,560 dozen; passion fruit, 6,475 bushels; coffee, 22,570 lb.; and pineapples, 620 dozen. There are many thousands of lemon trees and guavas growing wild throughout the island.

Large numbers of whales pass the island throughout the season, but owing to old-fashioned methods very few are captured. With the employment of up-to-date appliances the whaling industry might be of great importance. The preserved fish industry also offers a field for commercial energy; such fish as trevalla, kingfish, snapper, and many others, are plentiful. The "all red" cable from Great Britain via Vancouver,

Fanning Island, and Fiji, bifurcates at Norfolk Island, one line connecting with New Zealand, the other with Brisbane. A monthly steamship service between Norfolk Island and Sydney is carried on by Burns, Philp and Co.

IMPORTS AND EXPORTS, 1919-20 TO 1923-24.

Heading.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
	£	£	£	£	£
Imports	16,932	22,673	14,312	15,461	22,023
Exports	13,727	13,091	4,305	3,754	3,170
Total	30,659	35,764	18,617	19,215	25,193

7. **Social Condition.**—Education is free and compulsory up to the age of fifteen years. The school is under the New South Wales Department of Public Instruction, with standards corresponding to the State public schools, but the salaries and allowances of the teachers are paid by the Norfolk Island Administration. The number of scholars enrolled on the 30th June, 1924, was 136.

The Magistrates' Court has criminal jurisdiction in all crimes except capital offences, civil jurisdiction in all matters, and authority to grant probate and letters of administration.

8. **Finances.**—The receipts and expenditure for the year 1923-24 were as follows:—

NORFOLK ISLAND.—RECEIPTS AND EXPENDITURE, 1923-24.

Heading.	Receipts.	Heading.	Expenditure.
	£		£
Brought forward ..	5,748	Salaries	3,401
Commonwealth Subsidy ..	3,500	Repairs of Government	
Tariff Collections in Sydney ..	676	Buildings	199
Interest on Funded Stock ..	108	Landing Places, Signals, etc.	130
Postal Department ..	102	New Work (Mission Land) ..	2,650
Fees, etc.	463	Miscellaneous	697
Sale of Liquor	788	Purchase of Liquor	530
		Balance carried forward ..	3,778
Total	11,385	Total	11,385

Traffic in intoxicating liquor is prohibited, and the item "Sale of liquor" in the table refers to liquor dispensed under medical prescription.

E. NEW GUINEA.

1. THE ISLAND OF NEW GUINEA.

1. **Geographical Situation of New Guinea.**—New Guinea, frequently described as the largest island in the world, lies to the north of Australia, between 0° 25' and 10° 40' S. latitudes, and between 130° 50' and 150° 35' E. longitudes. Its estimated area exceeds 300,000 square miles, the greatest length being 1,490 miles, and the greatest breadth 430 miles.

2. **Discovery.**—The island was probably sighted by Abreus in A.D. 1511. The first visit by Europeans was apparently either that by the Portuguese Don Jorge de Meneses on his way from Goa to Ternate in 1526, or that by the Spaniard Alvaro de Saavedra in 1528. In 1606 Torres, having parted company with De Quiros at the New Hebrides, sailed, on his way to the Philippines, through the strait which separates the island from Australia, and which now bears his name.

3. **Colonization.**—Little progress was made for many years in exploration and settlement. First the Portuguese, and afterwards the Dutch, who to a great extent replaced them as the principal European traders in the East, seem to have jealously excluded other traders and adventurers, and to have kept the knowledge of their discoveries to themselves. The coasts were visited by Roda, Schouten, Lemaire, Tasman, Dampier, Torres, Bougainville, and Cook; but the difficulties of navigation, the savagery of the islanders, and the tempting fields for enterprise in the more temperate regions further south, diverted the energy of traders and voyagers. Forrest describes a voyage by himself in 1774. In 1793, New Guinea was annexed by two commanders in the East India Company's service. Since that date the Dutch have made extensive surveys of the western portion, and the British and Germans have occupied and colonized the eastern. In September, 1914, German New Guinea was seized and occupied by Great Britain by means of a force raised and despatched by the Australian Government.

4. **Partition.**—The three colonizing powers agreed to the partition of New Guinea, each having suzerainty over islands adjoining its own territory. The whole of the portion west of the 141st degree of latitude, comprising about 150,000 square miles, or nearly half the island, belongs to the Dutch. The eastern half was divided in almost equal portions between Great Britain and Germany, the area possessed by each (with adjacent islands), being about 90,000 square miles. An Anglo-German boundary commission appointed for the purpose of defining the boundary between the territories of the two nations, started operations on 26th December, 1908, and completed the field-work on 27th October, 1909. The total length of boundary delimited was 66½ miles. The work was both important and difficult. For a considerable portion of the survey, the country was exceedingly rough and mountainous, and the natives hostile. In one instance, the line was carried over a range at an elevation of 11,110 feet. The Dutch colony forms part of the residency of Ternate in the Moluccas, and has not been extensively developed. The German protectorate, where considerable commercial development had taken place, included the northern part of the eastern half of the mainland, known as Kaiser Wilhelm Land, and the large islands of the Bismarck Archipelago and the Solomon Group, as well as nearly 200 smaller islands. The south-eastern portion of New Guinea, nearest Australia, is a dependency of the Commonwealth of Australia. The German Pacific protectorate was terminated in 1914.

2. PAPUA.

§ 1. General Description of Papua.

1. **Early Administration.**—Surveys of the east coast of New Guinea by Stanley, Yule, Blackwood, Moresby, and others, brought home to Queensland, and to Australia generally, the danger to her commerce which would result from foreign possession of the islands and coasts opposite to Cape York, and from the holding by a hostile power of the entrance to the splendid waterway inside the Barrier Reef. The mainland opposite the shores of Queensland east of the 141st meridian was therefore annexed by that colony in 1883, but the action was disallowed by the British Government. In 1884, however, a British protectorate was authoritatively proclaimed by Commodore Erskine over the region lying east of the 141st meridian as far as East Cape, with the adjacent islands as far as Kosman island. In the year following, an agreement with Germany fixed the boundaries between the possessions of the two countries, and to Great Britain was assigned the portion now known as Papua, lying between the extreme limits of 5° and 12° S., and 141° and 155° E. The British protectorate was subsidized by Queensland, New South Wales, and Victoria, and lasted until 30th September, 1888, when it was proclaimed a possession of the Empire. Its constitution was then that of a Crown colony, in association, however, with Queensland. Administration was in the

hands of a Lieutenant-Governor, aided by an Executive and a Legislative Council, and advised by a Native Regulation Board. Port Moresby, on the south coast, was made the head-quarters of the official establishment; a supreme court was established there, and magisterial courts in the districts; and an armed native constabulary force, under a European officer, was instituted for the maintenance of order. Native village constables, as well as native interpreters, warders, boats' crews, etc., are also employed by the Crown.

2. *Administration by Commonwealth of Australia.*—The Territory was placed under the authority of the Commonwealth on 1st September, 1906, by proclamation issued in pursuance of Letters Patent of the 18th March, 1902, and was accepted by the Commonwealth by the Papua Act 1905, which came into force by virtue of the proclamation aforesaid. The transfer was made under the authority of section 122 of the Constitution (see p. 35 hereinbefore). The Territory is now under the administration of the Commonwealth, but not included within it, and is divided into eleven magisterial districts.

3. *Physical Characteristics.*—Papua lies wholly within the tropics. The northernmost point touches 5° S. latitude; its southernmost portion, comprising Sudest and Rossel Islands, lies between 11° S. and 12° S. latitude. It is separated from Australia by Torres Strait. The length of Papua from east to west is upwards of 800 miles; towards either end the breadth from north to south is about 200 miles, but about the centre it is considerably narrower. The Territory comprises also the islands of the Trobriand, Woodlark, D'Entrecasteaux and Louisiade groups. The length of coast-line is estimated at 3,664 miles—1,728 on the mainland, and 1,936 on the islands. The total area is about 90,540 square miles, of which 87,786 are on the mainland, and 2,754 on the islands. From the eastern end of the territory rises a chain of mountains, which forms a great central ridge and attains its greatest altitude, as it extends westwards, in the Owen Stanley Range, the highest points of which are Mount Victoria (13,200 feet), Mount Scratchley, the Wharton Range, and Mount Albert Edward. The western end of the possession is for nearly 300 miles generally low and swampy for some distance along the coast. The whole territory is well watered. The great mountains and a large portion of the lower country are covered with forest. The islands are mountainous, and, with the exception of the low coral islands of the Trobriand Group, part of Murua, and a few others of small dimensions, principally of volcanic formation. The highest is Goodenough Island, 8,000 feet. The largest rivers of the mainland flow into the Gulf of Papua. The Fly River, with its tributaries, drains an extensive area of the territory of the Netherlands, as well as of the British. Its length in British territory is about 620 miles, and it is navigable by a steam launch for over 500 miles. Other important rivers are the Turama and the Purari. There are many excellent harbours. A map of the territory was published in Official Year Book No. 16, p. 665.

§ 2. Population.

The white population of Papua on 4th April, 1921, was 1,343, made up of 961 males and 382 females. Included in these figures were 79 persons, who were passengers and crew of the s.s. *Marsina*, which was at Samarai at the taking of the Census. The following table gives the white population of Papua for the last five years:—

WHITE POPULATION OF PAPUA, 1920 TO 1924.

YEAR ENDED 30TH JUNE.

1920.	1921.(a)	1922.	1923.	1924.
1,096	1,343	1,104	1,086	1,276

(a) The figure for 1921 is the Census return.

In 1924 births exceeded deaths by 20, while arrivals exceeded departures by 170.

The chief occupations of the non-indigenous population at the taking of the Census were:—Government officials and employees, 132; commercial pursuits, 150; shipping, 124; tropical agriculture, 266; missionary work, 144; mining, 159.

It is not possible to make a reliable estimate of the number of natives, owing to the fact that much of the interior country is unexplored. The official estimate is 275,000. These speak many languages and dialects. The coloured population, other than Papuans, numbered on 4th April, 1921, 577, and included many mission teachers from Samoa, Fiji, and other Pacific Islands. On the same date, half-castes, with one of the parents a European, totalled 158. An Immigration Restriction Ordinance prohibits the immigration of persons who fail to pass the dictation test, or who are of bad character, or likely to become a charge upon the public. Exemptions may, however, be granted by the Lieutenant-Governor to persons of special skill required for employment as overseers or foremen.

§ 3. Native Labour, Taxation, Health, etc.

1. *Native Labour.*—(i) *General.* The rights of both employer and labourer are conserved by the Native Labour Ordinances. Service on the part of the native is voluntary, and he must be justly treated, and properly housed and fed. Employers may recruit personally, or obtain their natives through a licensed recruiter. Contracts of service must be in writing entered into before a magistrate or other qualified officer, and the natives must be returned to their homes on completion of engagement. During the period of service the recruiter or employer is personally responsible for the native's welfare. Refusal to work after an engagement, or desertion from service, renders the labourer liable to imprisonment. On the other hand, a magistrate may terminate an engagement where unjust or harsh treatment by the employer is proved. The term of indenture must never exceed three years, and in the case of miners and carriers eighteen months is the limit, but re-engagements may be made. The magistrate must satisfy himself that the remuneration is fair, that the native is willing to undertake the service, and that there is no probability of unfair treatment or detention. Wages must be paid in the presence of an officer. A medicine-chest stocked with necessary drugs and first-aid instruments must be kept by all employers.

The number engaged under contract of service during the year ended 30th June, 1924, was 7,578, as compared with 6,277 in the preceding year. Natives employed casually for periods not exceeding three months numbered 1,466. The New Guinea Copper Mines Ltd. is the largest employer, with a labour force of about 1,000 men. There were 252 Papuans engaged in the fishing industry in Torres Straits at the end of the year. The recruiting of females for work on plantations or in mining is not permitted, but they are allowed to accompany their husbands. The demand for labour has not greatly increased during recent years, and as new districts have been opened up for recruiting there is a sufficient supply of native labour. On some of the coconut plantations the practice has been adopted of importing cattle to keep down the grass and other undergrowth, and this will reduce the number of natives employed in the work.

(ii) *Skilled Workers.* The number of Papuans employed in skilled labour is gradually increasing. Most of the launches in the Territory have Papuan drivers, and natives have in some cases been entrusted with the sole charge of valuable sailing vessels. Moreover, they look after machinery on estates, while in Port Moresby they drive motor-lorries, and undertake much of the carpentry work required by Europeans. A scheme of registration and certification of native engineer-mechanics is now in operation.

2. *Wages.*—The wage paid to a native under contract is seldom below 10s. per month, with rations. This is the usual wage also of a plantation labourer, but those engaged in mining frequently receive more. Domestic servants are paid from 10s. to 40s. per month, according to experience. Natives in charge of vessels owned by Europeans, and drivers of launches and motor lorries, receive from £3 to £10 per month. The total amount of wages due to natives paid off in 1923–24, according to the contracts of service, was £42,776.

3. **Native Taxes.**—Under the Native Taxes Ordinance, passed in 1918, a tax not exceeding £1 may be imposed on natives, excepting native constables, mission teachers, natives unfit for work, and those who have not less than four living children. The proceeds of the tax must be expended on education, or devoted to purposes directly benefiting the natives, as may be prescribed.

The taxes collected in 1923–24 amounted to £16,410, bringing the credit balance of the fund to £45,191. On primary and technical education a sum of £5,051 was spent in subsidies to missions. An amount of £3,052 was utilized in connexion with the establishment and development of native plantations and preliminary expenses in regard to a rice mill. Other expenditure included £4,562 for medical purposes, and £932 for bonuses to mothers with more than four living children.

4. **Care of Half-caste Children.**—An Ordinance was passed on the 11th September, 1922, to provide for the care and maintenance of neglected half-caste children. The Ordinance provides that a sum of £26 per annum shall be paid to the Commissioner for Native Affairs by the adjudged father of the child until the child, if a boy, shall reach the age of 16 years, or, if a girl, 18 years.

5. **Health.**—During the year natives to the number of 2,052 were admitted to the hospitals. The chief complaints treated were yaws, ulcers, lung affections, and malaria. Two travelling medical officers and one European medical assistant are employed, and native medical assistants are being trained by them. The work done by the travelling officers consisted chiefly of dealing with cases of yaws, by means of the latest arsenical drugs, the distribution of hookworm treatment, and the control of venereal diseases. In all 2,233 cases of yaws, 22,996 cases of hookworm, and 90 cases of venereal disease were treated by the travelling staff. Out of an average of 7,000 native labourers employed by Europeans, 126 died, as compared with 117 during the previous year.

6. **General.**—On the 30th June, 1924, there were 240 accounts operated by Papuans in the Commonwealth Savings Bank. These had a total value of £1,742. The applications for aid during the year from infirm and destitute natives were covered by an expenditure of £78. This amount was obtained from a fund, provided by the *Papuan Act* 1905, for relieving distress amongst deserving natives.

§ 4. Land Tenure.

1. **Method of Obtaining Land.**—(i) *The Land Laws.* The broad principles upon which the land laws of Papua are based are :—(a) No land can be alienated in fee simple ; (b) the rental of the land leased is assessed on the unimproved value and is subject to reassessment at fixed periods.

A detailed account of the method of obtaining land was given in Official Year Book No. 6, pp. 1083–4.

(ii) *The Leasehold System.* With a view of attracting pioneer settlers, an ordinance was passed in 1906 under which leases were granted on very liberal terms. No rent was payable for the first ten years, the heavy expense of survey was borne by the Government, and no charge was made for the preparation and registration of the leases, that is to say, no payments whatever had to be made to the Government for ten years. Under this system, the area under lease increased in four years from 2,089 acres to 363,425 acres ; about 140 plantations were started, and nearly 1,000 acres planted during that period.

After allowing free survey for three years, it was decided that all future applicants for agricultural leases exceeding in area 100 acres should be required to pay the cost of survey. It was also found desirable to check a tendency amongst a proportion of land applicants to obtain areas so great that the improvement conditions could not be carried out. It was therefore enacted that no leases should be granted after 1st June, 1910, exceeding 5,000 acres in extent, and that rent at the rate of 3d. per acre must be paid from the commencement of all leases exceeding 1,000 acres in area.

2. Holdings.—(i) *General.* On the 30th June, 1924, the lands of the Territory were held as follows:—

PAPUA.—HOLDINGS, 1924.

Description.		Area.
		Acres.
Land held by the natives	..	56,931,679
Crown land	.. ..	800,712
Freehold land	.. ..	23,085
Leasehold land	.. ..	190,124
Area of Territory		57,945,600

Private sales of land in the Territory have now practically ceased. The Government buys from the natives, and then leases to planters, who are forbidden to have direct dealings in land with Papuans.

(ii) *Leaseholds.* The position as regards leasehold tenures may be seen from the following table:—

PAPUA.—LEASEHOLDS, 1919-20 TO 1923-24.

Year ended 30th June.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
Land held under lease .. acres (as recorded)	230,002	229,283	219,181	193,494	190,124

Of the total area of 190,124 acres shown above, agricultural leases accounted for 182,865, pastoral leases for 5,287, and other leases for 1,972 acres.

The area of land acquired by the Crown in 1923-24 was 3,634 acres.

The total area surveyed in the Territory is 23,085 acres of freehold, and 282,499 acres of leasehold.

§ 5. Production.

1. *General.*—The products of the Territory are obtained from its agricultural, forestal, fishing, mining, and manufacturing industries. For many years gold-mining yielded the largest returns, but the production has dwindled considerably owing to the exhaustion of the alluvial deposits. Satisfactory results are, however, expected from copper-mining on the Astrolabe field. There is also the possibility of obtaining petroleum in marketable quantities. Amongst plantation products, copra occupies the foremost place, but no planting has been done in recent years. Portions of the Territory appear well suited for cotton cultivation.

2. *Agriculture.*—(i) *Soil and Rainfall.* The physical features of Papua are favourable to agriculture. Rich soils at varying elevations, and heavy and evenly-distributed rainfall, have ensured success in cultivating almost every tropical product of value. The Territory comprises immense areas of rich alluvial and volcanic soils along the coast, and equally fertile land at elevations up to 6,000 feet. Splendid rainfalls are recorded except over a belt of country which runs back from the coast to the hills, and which has its dry season from May to November. This "dry" area is admirably suited for the production of tobacco, fibres, cotton, etc. There are 19 meteorological stations throughout the Territory, and an economic museum and agricultural library have been established.

(ii) *Plantations.* On 31st December, 1923, there were 260 plantations. Agricultural settlement has been mostly in the Central and Eastern Divisions, and the area planted was 60,863 acres, as against 60,044 in 1922. The principal plantation crops are coconuts, rubber, and sisal hemp. There is also some cultivation of bowstring hemp, kapok, coffee, tobacco, vanilla, cocoa, tapioca, cinnamon, tea, rice, and maize. The natives are compelled by an ordinance to plant coconuts for food supply. In the Kokoda district, which is not suitable for coconut planting, 8,000 rubber seeds and plants were distributed amongst the native villages in 1918. In addition to the coconuts in these plantations many more are planted over small and widely scattered areas by the older natives in accordance with custom. The following table shows the areas under the different cultures at the end of December, 1923 :—

PAPUA.—AREA OF PLANTATIONS, 1923.

Description.						Area.
						Acres.
Coconuts	..	..	..	..	..	46,798
Rubber	..	..	..	..	..	7,481
Hemp	..	..	..	..	..	5,849
Coffee	..	..	..	..	..	24
Rice	..	..	..	..	..	5
Cotton	..	..	..	..	..	103
Other cultures (including fruit trees)	..	..	..	..	..	603
Total						60,863

The yields of copra and rubber for the year ended 30th June, 1924, were :—Copra, 7,315 tons ; rubber, 304 tons. The increase in the return from copra over that for the preceding year was brought about by the coming into bearing of additional existing plantations, as no planting was done in 1923–24. In the case of rubber, the higher yield was due to the fact that the rise in price of the commodity rendered more extensive tapping profitable. The prospects for cotton-growing are apparently regarded with favour, and at the 30th June, 1924, over 700 acres had been planted. The figures quoted in the table refer to the acreage in December, 1923.

It was estimated in 1917 that over £1,000,000 had been expended in plantations, and, with the exception of two large British companies, practically the whole of the capital was subscribed in Australia and locally.

(iii) *Government Plantations.*—There are three Government plantations, consisting of 1,150 acres of coconuts, and 240 acres of rubber respectively. The net capital expenditure on these to the 30th June, 1924, was £39,081. For 1923–24 the aggregate net profit over working expenses and capital expenditure was £183.

(iv) *Indigenous Products.* There are many indigenous plants of great economic value. These comprise sandalwood and other timber trees, sugar-cane, cotton plants, rubber-both vine, nutmegs, ginger, bamboos, palms, bananas, bread-fruit, edible nuts, sago-palms, fruits, and vegetables. The classification of the indigenous flora has proceeded slowly, owing to the great difficulties of transport in jungle and mountainous country. Investigations, though incomplete, have proved the existence of a large diversity of useful timbers. Of 120 varieties catalogued, 16 are adapted to resisting heavy strains, and are suitable for girders, railway wagons, etc. ; 10 for railway carriage and coach building ; 15 for joinery, lining, flooring, etc. ; 14 for butter boxes ; 5 for boat building ; 4 for piles ; and 15 for cabinet work. Sandalwood is indigenous, and is largely used for cabinet work, while santal oil is distilled from the roots. Ebony is also produced for export. There are considerable areas of native rubber (*Ficus rigo*) ; but the planters generally prefer the imported Para rubber. Gutta-percha is obtained from a species of *palaquium*, which grows on the hills. Drugs, dyewoods, and spices are also

obtained from indigenous plants. The mountain firs offer possibilities in the shape of turpentine oils and timbers, while the conifer *Agathis alba* yields a valuable resin. Saw-mills have been established, but the output has not been sufficient to supply the local demand for building and other timber.

3. **Live Stock.**—On 31st December, 1923, the live stock in the Territory consisted of 465 horses, 4,973 head of cattle, 126 mules, 3 donkeys, 1,914 goats, and 673 pigs. A Government stud-farm has been established for the breeding of horses. The introduction of rabbits, foxes, hares, and monkeys is prohibited.

4. **Fisheries.**—Pearl-shell fishing occupies an important place in the industries of Papua. A considerable number of luggers is licensed, but the returns are mostly credited to Queensland, whose boundary approaches to within a few miles of the Papuan coast. The species of tortoise which supplies the commercial tortoise-shell is also a native of the Territory. *Bêche-de-mer* and trochus are found along the shores and reefs, and form valuable articles of export.

5. **Mining.**—(i) *Variety of Minerals.* Minerals have been found over a wide range of country. Those discovered so far are—gold, copper, tin, lead, zinc, cinnabar, iron, osmiridium, gypsum, manganese, sulphur, graphite, chromite, brown coal, lignite, and petroleum. The existence of petroleum has been traced at scattered intervals over a large area between Yule Island and the Purari Delta, in the Gulf Division of Papua. Up to the present, however, there has been no production on a marketable scale. Exploitation of the oil-fields by private individuals or companies was not permitted prior to 1923, in which year 6 licences to search for mineral oil and coal over an aggregate area of 4,652 square miles were granted.

Of precious stones, only the topaz and beryl have been obtained. Large beds of apparently good coal also exist. A geologist was added to the Government service at the beginning of the year 1911.

(ii) *Gold.* In 1888 the first gold was discovered, and the search gradually spread over every division, finds being reported wherever the explorers went. During recent years gold-mining has declined, and the yield in 1923–24 was the lowest recorded since 1895. The first dredging and sluicing plant in Papua commenced operations on the Gira River in January, 1924.

The total quantity, in fine ounces, and the value as returned of the gold yield for five years are given below :—

PAPUA.—GOLD YIELD, 1919–20 TO 1923–24.

1919–20.		1920–21.		1921–22.		1922–23.		1923–24.	
Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
fine ozs.	£	fine ozs.	£	fine ozs.	£	fine ozs.	£	fine ozs.	£
3,866	21,747	2,047	11,159	14,645	68,726	17,033	22,494	2,166	6,702

Most of the rivers, with the exception* of those flowing into the Gulf of Papua, have been declared open to gold-dredging, and good yields have been obtained. The total value of gold won to 30th June, 1924, was £1,662,436.

(iii) *Copper.* In 1924, the New Guinea Copper Mines Ltd. completed the erection of smelters with the necessary railway connexion thereto, and 3½ miles of aerial tramway for the conveyance of ore. Smelting was commenced, and a certain amount of matte produced, but full capacity production of blister copper depends on the installation of additional blowing plant. The ore reserves are estimated at 290,000 tons, containing 13,300 tons of copper and 36,250 oz. of gold.

(iv) *Osmiridium.* The existence of osmiridium had been known for some years, but no serious attempt was made to collect it, the alluvial gold miner even picking out the larger slugs of the metal from his gold parcel and throwing them away. The production in 1923–24 amounted to 119 oz. valued at £3,553.

(v) *Other Minerals.* Some good samples of galena (sulphide of lead) have been obtained, while cinnabar (sulphide of mercury), graphite (or plumbago), zinc-blende, native sulphur, and other minerals are known to exist. In 1924 a deposit of lignite was discovered on Smoky Creek, a tributary of the Era River.

A mineral laboratory and museum have been fitted up, and are available to prospectors and others interested.

6. *Water Power.*—Most of the rivers in Papua carry a large volume of water from a great height over a relatively short distance, thereby offering opportunities for the installation of hydro-electric power plants. It is estimated that there are at least 10,000,000 h.p. available for this purpose.

§ 6. Finance, Trade, Postal and Shipping.

1. *Finance.*—The revenue for 1923–24 exceeded that of the previous year by £8,692, the chief increase being in Customs and Excise. The principal sources of revenue were as follows :—Commonwealth Grant, £50,000; Customs and Excise, £48,925; Fees of Office, £6,739; Land Revenue, £3,715; Post Office, £2,838; Port and Wharfage Dues, £2,384; Miscellaneous, £11,062.

The expenditure was £7,949 more than that of the previous year. There was an increase of more than £3,000 in the Department of the Treasury, and a similar increase in that of the Government Secretary. The expenditure by the Public Works Department increased by about £1,000, and that of the Medical and Health Department by £1,700.

Returns of revenue and expenditure for the last five years, exclusive of Commonwealth grants, are given hereunder :—

PAPUA.—LOCAL REVENUE AND EXPENDITURE, 1919–20 TO 1923–24.

Item.	1919–20.	1920–21.	1921–22.	1922–23.	1923–24.
	£	£	£	£	£
Revenue	79,573	82,316	68,138	63,124	77,750
Expenditure	118,436	146,827	124,912	123,691	131,640

2. *Trade.*—The value of imports and exports for the last five years is shown in the table below :—

PAPUA.—VALUE OF IMPORTS AND EXPORTS, 1919–20 TO 1923–24.

Particulars.	1919–20.	1920–21.	1921–22.	1922–23.	1923–24.
	£	£	£	£	£
Imports	422,741	484,770	305,705	315,423	354,965
Exports	270,481	172,672	220,236	179,452	239,408
Total Trade	693,222	657,442	525,941	494,875	594,373

As in all new countries, the imports consist chiefly of articles necessary for the prima needs of the community, such as agricultural products and groceries, drapery, machinery,

tobacco, oils, paints, beverages, wood, wicker and cane, drugs, &c. The chief items of export during the last five years are as follows :—

PAPUA.—PRINCIPAL EXPORTS, 1919-20 TO 1923-24.

Article.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
	£	£	£	£	£
Osmiridium	2,930	6,245	959	2,790	3,553
Gold	21,757	11,159	68,726	22,494	6,702
Copra	124,035	68,578	87,377	112,481	136,659
Rubber	41,542	28,966	5,826	5,907	33,334
Hemp	12,284	7,723	4,630	..	1,125
Copper Ore .. .. .	..	1,830	13,514	14	120
Pearl Shell and Trochus Shell ..	24,255	4,464	4,043	1,868	6,120
Pearls	25,577	14,950	5,250	9,797	16,600
Bêche-de-Mer	612	7,922	15,045	13,453	10,441
Bark	2,686	1,408	752	..	..
Cotton .. .. .	..	..	..	..	550

3. **Shipping.**—The following table shows the number, tonnage, and nationality of oversea vessels entered and cleared at ports during the years 1919-20 to 1923-24. The whole of the tonnage was British.

PAPUA.—OVERSEA SHIPPING, 1919-20 TO 1923-24.

Year.	Vessels.	Tonnage.
1919-20	86	59,189
1920-21	108	67,624
1921-22	127	74,206
1922-23	143	77,676
1923-24	99	68,170

Throughout, the figures are exclusive of ships of war and Government vessels.

§ 7. Progress of Papua.

1. **Statistical Summary.**—As already stated (§ 2, *supra*) the Territory was placed under the Commonwealth control on 1st September, 1906. The following table indicates the progress that has been made since that date :—

PAPUA.—STATISTICAL SUMMARY, 1907 TO 1924.

Items.	Year ended 30th June—	
	1907.	1924.
White population	690	1,276
Native labourers employed (exclusive of Crown servants) ..	2,000	6,206
Number of white civil servants	65	143
Armed constabulary	185	(a)
Village constables	401	(a)
Territorial revenue	£ 21,813	77,750
Territorial expenditure	£ 45,335	131,640
Value of imports	£ 87,776	354,965
Value of exports	£ 63,756	239,408
Area under lease	acres 70,512	190,124
Area of plantations	acres 1,467	60,863
Meteorological stations established	3	19
Gold yield	fine ounces 12,439	2,166
Live stock in Territory—		
Horses	173	465
Cattle	648	4,973
Mules	40	126

(a) Not available.

3. THE TERRITORY OF NEW GUINEA.

§ 1. General Description.*

1. *Area and Geographical Position.*—The present Territory of New Guinea comprises that portion of the German New Guinea Protectorate which lay south of the equator (excepting only the island of Nauru, see F hereinafter), and which was known in German times as the "Old Protectorate." The principal islands (with their German names if these differ from those now in use) and their approximate areas are as follows:—

AREA OF TERRITORY OF NEW GUINEA.†

Particulars.	Approximate Area.	
	Square miles.	
North-East New Guinea (Kaiser Wilhelm Land)	70,000
Bismarck Archipelago—		
New Britain (Neu Pommern)	13,000
New Ireland (Neu Mecklenburg)	3,000
Lavongai (New Hanover or Neu Hannover)	600
Admiralty Islands and North Western Islands..	1,000
Solomon Islands—		
Bougainville	3,200
Buka	200
Total	91,000

2. *North-East New Guinea.*—(i) *General.* North-East New Guinea (Kaiser Wilhelm Land) is the north-eastern part of the island of New Guinea. Much of the interior, which is rugged and mountainous, with heights reaching to over 13,000 feet, is still unexplored. The mountain ranges approach the coast, leaving comparatively little flat land near sea level, but this narrow strip is very fertile. All trade and communications are by sea along the coast, and the interior is left almost wholly to the native population.

(ii) *Coast-line.* The coast-line, which is over 900 miles long, is in parts fringed with coral reefs, and there are many small, lofty islands along its course. Except for Huon Gulf in the little-developed east of the country, there are no deep inlets. Langemak Bay has commodious anchorage in deep water, and Finsch Harbour has landlocked anchorage for small vessels. Astrolabe Bay has two or three sheltered harbours, including Melanua, Madang (Friedrich Wilhelm Harbour) and Sek, which are the best on the coast. There are many other anchorages suitable, in certain winds, for schooners and small steamers.

(iii) *Rivers.* There are many rivers, of which the most important are the Sepik (Kaiserin Augusta) and the Ramu (Ottilien). The Sepik rises near the junction of the boundaries of Dutch New Guinea and Papua, and flowing easterly reaches the coast in latitude 4° S. It is navigable for 60 nautical miles by large ocean steamers, and for 300 nautical miles by steamers drawing from 10 to 13 feet. In 1914, a vessel of 50 tons ascended the river for 450 miles; it was then in flood and 7 fathoms deep at this distance, while at low water the depth was said to be 4 fathoms.

The Ramu rises in about 6° S. latitude and, flowing northwards, enters the sea near the mouth of the Sepik. It has been navigated, though with great difficulty, by flat-bottomed steamers for nearly 200 miles from its mouth.

3. *Bismarck Archipelago and Solomon Islands.*—(i) *General.* The islands of the Bismarck Archipelago and the Solomons are generally mountainous, with level ground near the coasts alone. The only low-lying islands are some in the Duke of York and Admiralty Group. The islands of Bougainville and Buka (Solomons) are equally rugged:

* A map of the Territory was published in Official Year Book No. 16, p. 665, but considerations of space preclude its repetition in the present volume.

† In regard to geographical position, see Year Book No. 16, p. 660.

Bougainville contains mountains reaching 10,000 feet. The soil is usually fertile, except on the low coral islands, where fresh water is scarce.

(ii) *Coast Line.* The coasts of the large islands often rise steeply from the water, with bold headlands; but as a rule there is a beach, frequently overgrown with mangroves. Sunken rocks and coral reefs fringe many of the coasts, especially of the low islands. There are many good harbours, the chief being Blanche Bay, in New Britain, containing the good anchorages of Matupi Harbour and Simpson Harbour; Kavieng Harbour in New Ireland; Mioko in the Duke of York Islands; Peter Harbour in the Vitu Islands; Nares Harbour in Manus Island; and Queen Carola Harbour in Buka Island.

(iii) *Rivers.* Most of the streams in these islands are too shallow and too rapid for navigation.

4. *Revision of Geographical Names.*—A revision of geographical names, based on a list of names prepared by the Permanent Committee on Geographical Names for British Official Use, is in progress. A provisional list of names in the Territory is published in the Report for 1921–22. Among the changes already made are the use of North-East New Guinea for Kaiser Wilhelm Land, and Lavongai for New Hanover.

5. *Maps.*—A geological map, and maps showing the areas in which the native population has been counted or estimated, the areas of land alienated in freehold or leasehold, roads and Government stations, are published in the Report to the League of Nations for 1921–22. Admiralty Chart No. 2766 (North-East Coast of New Guinea, with Bougainville, New Britain, New Ireland, Admiralty Islands and adjoining reefs) is a useful general map of the Territory.

§ 2. Climate and Health.

1. *General.*—The Territory has a moist tropical climate, with small differences between daily and seasonal extremes of temperature. There is no cool season, rain falls in all months, and the humidity is high. The Territory is outside the area of typhoons, but strong winds are not uncommon, and damage is occasionally done to plantations.

2. *Temperature.*—The mean annual temperature on the coast is about 26° to 27.5° C. (79° to 81° F.)—a moderate temperature for the latitude—and the difference between the means of the coldest and warmest months is not more than 2° F.

3. *Rainfall.*—There is no really dry season. At Rabaul the period of the north-west monsoon, November to April, is wetter than that of the south-east trade from May to September or October; but in some other places, especially the south coast of New Britain and in the vicinity of Finsch Harbour, the south-east trade brings the principal rains. The position of the coasts with regard to the direction of the prevailing winds is the decisive factor in the rainfall. The annual rainfall amounts, at nearly all the stations at which observations have been made, to over 80 inches. In Bougainville, southern New Britain, and the island of New Guinea, the yearly average is from 100 to over 250 inches; but amounts as low as 66 inches have been reported from some stations on the coast of the island of New Guinea. The average rainfall at stations in the Gazelle Peninsula is about 95 inches. A region of high rainfall, reaching over 250 inches, is in the vicinity of Finsch Harbour. There are large variations from year to year, and some districts of the Territory are subject to unusually dry periods. Thus, in 1894, Kokopo (on Blanche Bay, north-east of New Britain) had only 65.6 inches, while in 1891 there were 133.3 inches; the average over a period of years was 74.4 inches. There is reason to believe that a severe drought which prevailed in New Ireland in the years 1914 and 1915 was in part responsible for the large decrease in the population of that island which took place during the period of the military occupation.

4. **Humidity.**—The humidity is very high. Observations taken at Rabaul during the years 1916 to 1921 showed an average humidity of 75 per cent., and the variation in the monthly means was only from 69 per cent. (October) to 80 per cent. (April). At Madang, during the same period, the yearly average was 80 per cent., the lowest monthly mean 77 per cent. (August), the highest 83 per cent. (April). During the same period at Kieta (Bougainville) the mean was 78 per cent., the minimum 74 per cent. (August and October), and the maximum 80 per cent. (June).

5. **Influence on Health.**—The climate in North East New Guinea and at many places in the Bismarck Archipelago and the Solomon Islands is enervating for Europeans. At some places, however, and notably at Rabaul, the heat and humidity are tempered by the constant breezes, and it is possible for Europeans, with careful attention to diet and exercise, and precautions against diseases, to maintain good health. When the measures taken against malaria and other diseases have produced their full effect, and use has been made of places in the mountains suitable for healthy sanatoria, it is hoped that a satisfactory average of health will be maintained.

§ 3. Government.

1. **The Military Occupation.**—On the 17th September, 1914, the Acting Governor of German New Guinea signed terms of capitulation with the officer commanding a Naval and Military Expedition sent from Australia, and thereafter the Territory was under military administration until the establishment of Civil Government in May, 1921.

2. **Mandate.**—In 1919 it was decided by the principal Allied and Associated Powers that the Territory of New Guinea, which Germany gave up as one of the terms of peace, should be entrusted under Mandate from the League of Nations to the Government of the Commonwealth of Australia. The issuing of the Mandate was, however, delayed; and it was not until 17th December, 1920, that its terms were settled, and the Mandate itself did not reach Australia until April, 1921.

The terms of the Mandate are given in Official Year Book No. 16, p. 662-3.

3. **New Guinea Act.**—In anticipation of the issuing of the Mandate, the Commonwealth Parliament had already, in September, 1920, passed the New Guinea Act 1920, by which the Governor-General was authorized to accept the Mandate when issued. The Territory was, by the Act, declared to be a Territory under the authority of the Commonwealth, by the name of the Territory of New Guinea.

The Act provided for an Administrator, while power to legislate for the Territory was to be exercised by the Governor-General.

Provision was also made for the observance of safeguards in the interests of the natives as set out in the Mandate.

4. **Establishment of Civil Government.**—On receipt of the Mandate, arrangements were made by the Prime Minister, under whose control the administration of the Territory was placed,* for the establishment of Civil Government, and on the 9th May, 1921, a proclamation was issued in Rabaul that the military occupation had that day terminated. On the same day the first Ordinances made by the Governor-General under the New Guinea Act 1920 came into force. The most important of these was the *Laws Repeal and Adopting Ordinance* 1921, which provided that German laws should cease to apply to the Territory, and substituted other statute laws, together with the principles and rules of common law and equity in force in England, as the basis of the law of the Territory, subject to modification by Ordinance made by the Governor-General.

* Control of the administration was transferred in July, 1923, to the Department of Home and Territories.

The Ordinance also preserved the rights of natives in land, and the existing rights, privileges and customs of the natives in regard to cultivation, barter, hunting, and fishing; and it provided that tribal institutions, customs, and usages should continue, so far as they were not repugnant to the general principles of humanity.

Other Ordinances which came into force on the same day provided for the establishment of courts of law, and for the prohibition of the supply to natives of firearms, ammunition, intoxicating liquor, and opium.

5. **Expropriation.**—The Treaty of Peace provided that German nationals resident in her former colonies might be repatriated; and that the property rights and interests of German nationals in former colonies might be retained and liquidated by the Allies, the proceeds being credited to Germany in part payment of the reparation payable by her under the Treaty.

In pursuance of these powers, in September, 1920, the property of the principal German companies in the Territory, and in March, 1921, that of a large number of German planters, was vested in the Public Trustee; and the management of their businesses and plantations was entrusted (pending the sale or other disposal of the properties) to the Expropriation Board. (See Year Book, No. 17, p. 631.)

6. **Departments and Districts.**—The Administration is organized in eight Departments—Government Secretary; Treasury; Native Affairs; Public Health; Public Works; Customs and Shipping; Lands, Mines, Surveys, and Forestry; and Agriculture.

For administrative purposes, the Territory is divided into ten Districts, named after the principal stations in them, as follows:—In New Britain—Rabaul, Talasea, and Gasmata; on the Mainland—Morobe, Madang, and Aitape; in New Ireland and Lavongai (New Hanover)—Kavieng and Namatanai; in Admiralty Islands and adjoining islands—Manus; in Solomon Islands—Kieta. Each District is under a District Officer, assisted by a small staff.

7. **Statute Law.**—The Acts of the Commonwealth Parliament do not (unless expressly so stated) extend to the Territory, but the *Laws Repeal and Adopting Ordinance* 1921 provided that certain Acts and Ordinances should be applied thereto. (See Year Book, No. 17, p. 631).

8. **Reports to the League of Nations.**—Four Reports have been rendered to the League of Nations in compliance with Article 6 of the Mandate, the latest being for the year ended 30th June, 1924.

§ 4. Population.

1. **White Population.**—The increase in the white population at various intervals since 1885 is shown in the appended tabulation. On 4th April, 1921, it was 1,288, of whom about 250 were missionaries, and 262 were persons engaged in administration; 715 were British subjects, and nearly all the remainder were nationals of former enemy countries. On 30th June, 1924, the number of Europeans was about 1,320.

TERRITORY OF NEW GUINEA.—WHITE POPULATION, 1885 TO 1924.

Year.					Number.
1885	..	..	..	..	64
1895	..	..	..	..	203
1910	..	..	..	..	687
1914	..	..	..	..	1,027
1921	..	..	..	..	1,288
1924	..	..	..	..	1,320

2. **Asiatic Population.**—Malays seem to have been the first Asiatics brought by the Germans to German New Guinea; 37 of them are recorded on the mainland in 1885. About 1889 the New Guinea Company began to bring Chinese, Malays, and Javanese in growing numbers from Singapore and Java to work on its plantations; by 1892 there were about 1,800 on the mainland. By 1898 the number had decreased to 300 or 400, while at present it is less than 250.

About ten years later. Chinese were brought from China to the Protectorate; in 1911 there were 555, in 1914, 1,377, in 1921, 1,424, and in June, 1924, about 1,330.

In 1895 there were 2 Japanese in the Protectorate, in 1911 there were 25, in 1914, 103, in 1921, 87, and in June, 1924, about 59 residents. The total Asiatic population was 1,681 in 1914, and 1,778 in 1921. There were also, in 1921, 28 Polynesians and 69 half-castes.

The number of Asiatics has slightly decreased. In 1923–24 the births of Chinese exceeded the deaths by 24, but departures exceeded arrivals by 41, so that the population decreased by 17. The number of Japanese decreased by 8.

The Chinese provide the skilled artisans and domestic servants of the Territory, and many of them are small traders. There is only one Japanese firm of any size, but it is not a serious competitor with European firms; most of the Japanese residents are employed in the plantations, shipyards, and stores.

The Immigration Act 1901–1920 of the Commonwealth is in force in New Guinea.

3. **Native Population.**—As a large portion of the Territory is not under Government influence it is not possible to obtain reliable figures in regard to the number of the natives.

The following table shows the number enumerated in 1923, in each of the administrative districts.

TERRITORY OF NEW GUINEA.—NATIVE POPULATION, 1923 (EXCLUSIVE OF INDENTURED LABOURERS).

District.	Children.			Adults.			Total.		
	Males.	Females.	Persons.	Males.	Females.	Persons.	Males.	Females.	Persons.
Aitape ..	4,711	3,510	8,221	10,551	6,831	17,382	15,262	10,341	25,603
Gasmata ..	1,526	1,647	3,173	3,270	2,609	5,879	4,796	4,256	9,052
Kavieng ..	3,138	2,968	6,106	7,984	7,722	15,706	11,122	10,690	21,812
Kieta ..	5,044	3,963	9,007	11,866	9,808	21,674	16,910	13,771	30,681
Madang ..	5,128	4,005	9,133	9,492	7,682	17,174	14,620	11,687	26,307
Manus ..	2,069	2,171	4,240	4,418	4,692	9,110	6,487	6,863	13,350
Morobe ..	9,278	7,657	16,935	12,243	11,989	24,232	21,521	19,646	41,167
Namatanai ..	1,942	2,160	4,102	5,333	4,529	9,862	7,275	6,689	13,964
Rabaul ..	6,162	5,671	11,833	11,327	8,962	20,289	17,489	14,633	32,122
Talasea ..	2,676	3,225	5,901	5,367	5,186	10,553	8,043	8,411	16,454
Total ..	41,674	36,977	78,651	81,851	70,010	151,861	123,525	106,987	230,512

The total native population in the Territory is estimated roughly at between 325,000 and 350,000. Whether the total is increasing or decreasing cannot yet be ascertained with certainty; but apparently they are decreasing in New Ireland and Bougainville, and increasing in New Britain, while in the Admiralty Group the number appears to be stationary.

§ 5. The Natives.

1. **General.**—A brief description of the native inhabitants of the Territory was included in Year Book No. 16, page 670. It may be noted here that the natives are divided into two main groups—Melanesian and Papuan—the former, with odd exceptions constituting the population of the Bismarck Archipelago, the Solomon Islands, and the

coastal districts of the New Guinea mainland; while the latter inhabit the interior of the mainland. Odd tribes of Negritoes are known to exist in the mountains of New Guinea. In the Admiralty Islanders there is a strain of Papuan, and, possibly, of Polynesian blood, while the Western Islanders and the inhabitants of the small islands east and south-east of New Ireland are Micronesians.

2. **Land Tenure.**—Native customs in regard to the ownership and use of land may be briefly outlined as follows:—The ownership and use of the land are generally individual, although, in some rare cases, particularly in North Bougainville, the communal system exists. In districts where a great many coconut-bearing palms are growing on native lands it is often found that the land is the property of a chief or one of the old men of the tribe, and that the coconut palms growing thereon are divided into small groves, and are the property of several members of the tribe. Customs with regard to the use of unoccupied forest lands differ. Right of inheritance to land is almost invariably through the maternal branch. (See Year Book No. 17, p. 634.)

3. **Research Work.**—During the German occupation of the Territory a certain amount of research work was carried out, partly by scientific expeditions, and partly by missionaries and by a local resident, and an anthropologist has been appointed by the Commonwealth Government to consolidate the work already done, and to extend it to parts of the Territory which have not yet been covered.

4. **Education.**—The education of the natives was provided for in the "Education Ordinance of 1922," under which the Administrator was authorized to establish schools, grant money therefor, prescribe instruction, arrange for the training of teachers, and other matters. Simultaneously a Native Education Trust Fund was inaugurated, over which the Administrator was given control, and for the benefit of which he was empowered, within certain limits, to levy taxes on the natives and on employers of native labour.

The Education Tax imposed on the natives realized in the first year £5,168, and that on the employers £156. In the second year the tax returned £16,357. The expenditure on native education in 1923-24 amounted to £18,955. This included £12,185 spent in the erection of new buildings at Malaguna.

In 1923 three schools had been established as follows:—(1) *An Elementary School* at Kokopo, for (a) the education of native children generally; (b) the training of intelligent natives as assistant teachers; (c) to qualify a certain number for positions in the lower grades of the Government service; (d) to prepare some for entrance into the Technical School, and others to take positions in the economic and commercial industries of the Territory. (2) *A Technical School*, at Rabaul, for training natives as workers in the various handicrafts required in the Territory. (3) *A School of Domestic Economy*, at Rabaul, to train natives as domestic servants. The establishments at Kokopo and Rabaul have since been removed to Malaguna, which has been made the educational centre for the natives in the Mandated Territory. The buildings erected there during 1923-24 comprise:—(1) Staff quarters; (2) Elementary school and dormitories, with accommodation for 200 children; (3) Technical School workshops for carpentry, basket-work, plumbing, and engineering; (4) Technical School dormitories, with accommodation for 50 trainees; (5) Home, containing schoolrooms and dormitories for half-caste children.

At the end of the year 1924 there were 104 native children attending the Elementary School. These were representative of every district in the Territory. (See Year Book No. 17, p. 635.)

The main educational activities in districts other than Rabaul are being carried out by the missions.

The schools maintained by the various Missions are of three classes—(a) elementary schools in villages; (b) intermediate boarding-schools at Mission head-quarters; and (c) high schools. The village schools are under native teachers; the most promising pupils pass to the intermediate schools, where they are taught by European teachers assisted by native tutors. At the high schools, teachers are trained for the village schools and tutors for the intermediate schools. Technical training is provided by the Missions in the vicinity of Rabaul and in parts of the New Guinea mainland, the natives being trained in printing, bookbinding, tanning, bootmaking, carpentry and cabinet work, and the

making of ropes, bricks, baskets and mats. At the end of June, 1924, the various missions maintained 783 schools, employing 158 European teachers and 886 native teachers. The pupils numbered 27,185.

The granting of assistance to Mission schools is authorized by the Education Ordinance.

5. Health of Natives.—In a report dealing with the health of the natives in New Britain submitted before the war, it was stated that “the natives in the districts examined are not degenerate; but they are sick.” The same qualification undoubtedly applies to the native population throughout the Territory.

The diseases taking the greatest toll of native life—directly, or through lowering vitality—are:—Malaria, respiratory diseases, dysentery, frambœsia, yaws, tropical ulcer, hookworm, filariasis, and beriberi.

Up to the age of puberty, and particularly through the first five years of life, malaria is responsible for a large number of deaths. The disease chiefly affects the coastal natives, while the inland tribes are very subject to respiratory diseases. Tuberculosis and respiratory diseases as a whole claim the greatest number of deaths. Dysentery, which generally occurs in the latter part of the dry season, is most severe on newly-recruited natives, especially if poorly nourished. Of spirochætal diseases, syphilis is extremely rare, but frambœsia tropica is prevalent. Yaws accounts for a large number of the cases treated in the hospitals. Tropical ulcer is widespread, and is one of the most distressing afflictions amongst the native population. Hookworm is very prevalent, and is seriously undermining the health of the natives. Filariasis is severe amongst the coastal natives. Skin and eye diseases are exceedingly common everywhere. Goitre is endemic in some districts. Gonorrhœa is very common amongst the natives in Rabaul and Northern New Ireland, but little is known regarding its prevalence in other districts, while leprosy occurs sporadically.

The Health Department in Rabaul possesses:—(i) a staff of medical officers and orderlies, including travelling doctors; (ii) well-equipped Native Hospitals at Government stations and sub-stations (its staff also supervises hospitals on plantations); (iii) a laboratory in Rabaul under an expert bacteriologist; (iv) training system for natives as medical tul-tuls; (v) scheme of distribution of medical necessities; (vi) a leper-station near Madang; and (vii) undertakes the general oversight of sanitary conditions.

The number of cases treated in the Government Native Hospitals during 1923–24 was 6,901, of which 150 proved fatal. The hookworm campaign is being vigorously prosecuted, and 76,413 cases were treated during the year.

6. Missions.—There are a number of mission societies working in the Territory. The Society of the Sacred Heart of Jesus works in the Bismarck Archipelago, the Society of the Holy Ghost along the coast of North-East New Guinea from Sek to the Dutch border, the Marists in Buka and Bougainville. These are Roman Catholic Missions. The Protestant Missions are the Australian Methodist Mission in New Britain and New Ireland, the Liebenzell Mission in the Admiralty Group, and the Rheinische Mission and the Neuendettelsauer Mission (now supported and staffed by the Lutheran Churches in Australia and America), which work along the coast of North-East New Guinea from Sek to the Papuan border. All these societies combine teaching and planting with their missionary work. They conduct native schools, and own plantations covering nearly 81,000 acres, of which about 15,000 acres are planted with coconuts. The number of Europeans engaged in mission work is about 250, of whom more than half belong to the Holy Ghost and Sacred Heart Missions. Some of the societies have small printing plants by which reading matter in one or other of the native languages is produced.

§ 6. Land Policy.

1. Acquisition of Land.—Land, in pre-German days, was bought from the natives for a little “trade goods.” After the annexation by Germany, land-laws and regulations were introduced which, in the course of years, were added to and made more stringent, eventually developing into the “Land Regulations of 1st January, 1914.” The policy of the German Government showed a preference for freehold tenure: A thirty years lease system was, however, introduced for Chinese planters, who could not own land. The access to land by Europeans, irrespective of nationality, was easy, and no limit was

fixed to the areas they could own. Where ownership in the land was claimed by the natives, the purchaser had to satisfy them with the usual gifts, after which he had to pay the Government not more than 8s. an acre and not less than 5 pence, and bind himself to make certain improvements. Under these easy terms large areas were acquired by various companies, mission societies, and private persons. The total area held by Europeans (mainly Germans), when war broke out, measured upwards of 700,000 acres, of which about 145,000 acres had been planted.

During British military occupation the sale of land was suspended, while leases of land were issued only for twelve months at a time.

2. Land Policy of the Present Administration.—The Land Ordinance 1922-24 provides for sale as well as leasing of land belonging to the Crown. The divergence from the policy usually adopted by the British in the Pacific (including Papua), which provides for leasehold only, was made with a view to disposing by sale of the freehold properties taken over from Germans, and which are now controlled by the Expropriation Board. The general land policy of the Commonwealth Government is based on the leasehold principle, and the greater part of the Lands Ordinance is devoted to provisions therefor. All Crown grants or leases contain a reservation to the Crown of all minerals, including mineral oil. Leases are for a term not exceeding 99 years, except where a shorter period is provided. Crown lands, except in towns, are classified by a Land Board into land suitable for agriculture (Class A) and land not so suitable (Class B), and the unimproved value of the land is assessed. In the case of agricultural leases for more than 30 years, the rent is 5 per cent. of the unimproved value, with power to remit during the first ten years, and subject to re-appraisal every twenty years. The maximum area of land which may be held by any person under agricultural lease may not exceed 5,000 acres, and the unimproved value may not exceed £5,000. Pastoral leases of lands of Class B may be granted for terms not exceeding 30 years, at a rental of 2½ per cent. of the unimproved value, subject to re-appraisal every ten years. Agricultural leases are subject to improvement conditions, and pastoral leases to stocking conditions. Leases of town allotments may be granted for terms not exceeding 99 years, at a rent to be fixed at such percentage of the unimproved value as is prescribed. Leases may be granted to Missions rent free.

During the year 1923-24 leases covering a total area of about 5,700 acres were granted.

3. Registration of Titles.—Under German law there was a system of registration of titles in a "Ground Book," but registration did not confer an indefeasible title. The German system has been replaced by one modelled on the Torrens plan, embodied in an Ordinance entitled the "Lands Registration Ordinance," 1924.

§ 7. Production.

1. General.—The Territory possesses great natural potentialities, but their development has barely commenced, and a limit to economic progress is more likely to be found in the scarcity of labour than in the exhaustion of resources.

2. Agriculture.—(i) *General.* No estimate has yet been made of the area of land suitable for agriculture; but it is certain that the area already alienated, if planted to its full capacity, would be far greater than the present native population could cultivate. The earliest traders contented themselves with the collection of native products (including copra), for which they exchanged "trade" goods. It was not until 1883 that the first plantation was laid out, at Ralum on Blanche Bay; the first plantation on the mainland was that of the New Guinea Company at Finsch Harbour, where the first settlement was placed in 1885.

The natives have been described as a people of peasant proprietors, and everywhere they practise a low form of agriculture. Their gardens afforded but a small amount of produce for oversea trade, and the exports of the Protectorate grew only as European plantations were made. Plantations extended slowly, for the Protectorate is almost everywhere covered with forest, and the clearing and planting of the land, even if labour can be had, necessarily occupies considerable time.

In 1923–24 a Director of Agriculture was appointed to supervise the development of tropical agriculture. To avoid earlier mistakes in planting, an examination of the soil in different localities was inaugurated, and this revealed that much planting of coconuts had been done in the past under soil-conditions unfavourable to success. A museum has been established in Rabaul, and contains a wide range of exhibits in anthropology, botany, zoology, mineralogy, etc. The programme laid down by the Director of Agriculture includes research work, the founding of experimental stations, meteorological observation, the issue of bulletins to planters, and the appointment of experts to instruct the natives in growing foodstuffs.

(a) *Tobacco*. This crop has been cultivated with success at Astrolabe Bay in North-East New Guinea, and in the Bismarck Archipelago. In 1893 there were 500 acres under tobacco, and the export reached 77 tons. Tobacco of high quality, rivalling the best Sumatra leaf, is said to have been produced. Later, the growing of tobacco on European plantations was abandoned, partly, it is said, for want of intelligent labour, although it continued to be grown by the natives for their own use.

(b) *Cotton*. The New Guinea Company also experimented in the growing of cotton, and it is said that a product of high quality was obtained. In 1896 the export amounted to 60 tons. In recent years this crop has been discontinued except for experimental purposes.

(c) *Sisal Hemp*. There was a steady although small export of sisal hemp in German times. The quantity exported in 1913 was 10 tons, but none seems to have been exported since 1914. The principal plantation was at Melanua (Konstantinshafen) on Astrolabe Bay.

(d) *Cocoa*. Cocoa has been successfully grown, principally at Vitu (French Islands); in 1913, 137 tons were exported, and in 1923–24, 70 tons.

(e) *Coffee*. Coffee has been grown with success, but there has been little production.

(f) *Rubber*. A limited area is still planted with rubber. The trees were, however, planted before it was known which species yielded the best product, and *Ficus elastica* was propagated instead of the more valuable *Hevea brasiliensis*. The low price of inferior rubber rendered the plantations unprofitable, and the trees are not being tapped.

(g) *Copra*. Indigenous in most of the islands, the coconut palm yielded copra to the traders from the beginning of European trade, and the plantations, commenced in 1883, have steadily extended in area and production, until 95 per cent. in value of the total exports of the Territory now consists of copra. The quantity exported in 1913 was 14,000 tons; in 1918, it was over 20,000 tons; and in 1923–24 it was 34,974 tons, an increase of 2,326 over the figures for the previous year. The area under coconuts increased during the military occupation from 76,845 acres in 1914 to 133,960 acres at the end of 1918, and was, on 30th June, 1924, 172,373 acres, of which 94,009 were in bearing.

(h) *Other Crops*. The climate and soil of the Territory are suitable for the cultivation of rice, Manila hemp, cinchona, nutmeg, vanilla and maize. It has been proved that nearly all these can be grown successfully, but hitherto their cultivation has either not advanced beyond the experimental stage or has been attempted on a small scale only. Sugar-cane of many varieties flourishes, and the natives cultivate extensive areas for their own use; other indigenous food-producing plants include the sago palm, and the cassava plant (which yields arrowroot and tapioca and is used in the making of glucose).

(i) *Plants Yielding Power Alcohol*. It seems probable that alcohol for power purposes will be obtainable economically from the Territory. The sago palm and nipa palm yield as much as 60 gallons a ton, and in places are very abundant.

(ii) *Area of Plantations*. The area of plantations and the crops grown thereon are shown in the table hereunder for the year 1923–24. The figures are exclusive of native plantations.

TERRITORY OF NEW GUINEA.—PLANTATIONS, 30th JUNE, 1924.

Particulars.	Government Plantations.	Privately owned Plantations.	Controlled by Expropriation Board.	Total.
Area of Holdings acres	6,938	109,779	294,558	411,275
Area cleared "	2,638	64,593	118,778	186,009
Area Cleared and Planted "	2,558	60,719	115,886	179,163
Coconuts—				
Area Planted acres	2,555	56,337	113,481	172,373
Area Bearing "	1,080	31,498	61,431	94,009
Rubber—				
Area Planted acres	..	405	2,478	2,883
Area Bearing (a) .. .. "	..	..	..	..
Cocoa—				
Area planted acres	..	37	551	588
Area Bearing .. .. "	..	..	242	242
Coffee—				
Area Planted acres	..	10	4	14
Area Bearing "	..	5	4	9
Cotton—				
Area Planted acres	..	1	..	1
Area Bearing "	..	1	..	1
Maize—				
Area Planted acres	..	213	..	213
Area Bearing "	..	135	..	135
Native Food —				
Area Planted acres	21	2,098	715	2,834
Area Bearing (b) "	21	1,448	..	1,469

NOTE.—(a) Rubber not tapped. (b) Native food of all kinds is mostly grown between young coconut palms not yet in bearing, therefore the total area cleared and planted does not agree with the detailed areas under various crops.

The area of plantations at various periods from 1885 to 1924 is shown hereunder. As in the case of the previous table, the figures are exclusive of native plantations :—

TERRITORY OF NEW GUINEA.—PLANTATIONS, 1885 TO 1924.

Year.	Total Area.	Area in Coconuts (including Area not in Bearing).
	Acres.	Acres.
1885	148	(a)
1895	2,152	(a)
1911	58,837	51,510
1914	84,941	76,845
1922	173,272	168,060
1923	172,218	167,428
1924	179,163	172,373

(a) Not recorded.

3. Live Stock.—There is little natural pasture in the Territory, but the coconut plantations are now of a sufficient area to maintain numerous live stock. In 1924 there were 705 horses, 8,789 cattle, 3,276 sheep, 4,814 goats, and 5,480 pigs (exclusive of the large number of pigs kept by the natives). See also Official Year Book No. 16, page 677.

4. Timber.—The timber resources of the Territory are not yet fully known, but an investigation was commenced by a forestry expert in 1924. Both hardwood and softwood are found in several varieties, some of which are of excellent quality. The timber required for house and ship-building and for other purposes is mostly obtained locally. In North-East New Guinea the Neuendettelsauer Mission and the Holy Ghost Mission both possess up-to-date saw-milling plants, while most of the timber required in the Archipelago is required by the Sacred Heart Mission's saw-mill, and by a privately-owned mill, both at the eastern end of New Britain.

The Timber Ordinance 1922 provides for the issue of permits and licences to cut timber. Timber growing on native lands cannot be acquired by private purchasers directly from the natives, but only through the Administration. A royalty (the amount to be fixed by regulation) is to be paid on all timber exported.

5. Fisheries.—The wealth of the waters of the Territory has so far been little exploited. Fish are caught at many places along the coast to supply the small local demand of the natives and of the few Europeans living there. Pearl-shell is exported in fair quantities, while trepang, shark fins, trochus-shell, and tortoise-shell also figure amongst the exports. The value of marine products exported in 1923–24 was £11,359.

6. Mining.*—There has been little mining in the Territory, and knowledge of the mineral resources is as yet but scanty. Gold has, however, been discovered on the Waria, the Ramu, the Francisco, and the Markham Rivers. Osmiridium is reported to have been found on the upper tributaries of the Ramu, and platinum on the Kabenau River. Copper has been discovered in the form of chalcopyrite and malachite in the Baining District. Iron occurs as magnetite and hæmatite in the Baining District, apparently in large quantities. Sulphur occurs in several localities in the volcanic regions of the Territory. Phosphates suitable for use in the making of manures are found in the Purdy Islands. Brown coal has been found on the mainland in the vicinity of Astrolabe Bay, and in the southern portion of New Ireland.

Oil is known to exist, but so far it has not been discovered in payable quantities.

Since the Mining Ordinance of 1922 came into force, one goldfield and four mineral fields have been proclaimed. The goldfield is in the administrative district of Morobe, and the mineral fields comprise the districts of Aitape, Madang, Namatanai and Kieta.

From the gold-fields of Morobe 6,617 ounces of gold, valued at £16,542, were exported in 1923–24. During the same year 35 miners' rights were issued, and 36 dredging and sluicing leases granted.

By the Mining Ordinance of 1923, private companies incorporated or registered in the Territory, two-thirds of whose shares are held by British subjects, became eligible to engage in prospecting and mining for mineral oil and coal. Ten applications, covering an area of 8,000 square miles on the mainland, and 2,000 square miles on the south coast of New Ireland, were granted up to 30th June, 1924.

§ 8. Trade.

1. Total Trade.—The value of the imports, exports, and total trade at various periods since 1887, and during each of the last five years, is given in the table hereunder:—

TERRITORY OF NEW GUINEA.—TRADE, 1887 TO 1924.

Year.				Imports.	Exports.	Total.
				£	£	£
1887 ..	..	..	..	17,133	19,580	36,713
1897 ..	..	..	..	36,713	31,352	68,065
1907 ..	..	..	..	166,585	97,563	264,148
1919–20	..	..	..	506,767	849,422	1,356,189
1920–21	..	..	..	661,441	673,992	1,335,433
1921–22	..	..	..	468,711	499,197	967,908
1922–23	..	..	..	516,855	630,892	1,147,747
1923–24	..	..	..	485,634	718,535	1,204,169

The import values are exclusive of money and Government stores. In 1923–24 the imports were distributed as follows:—From Australia, £480,341; America, £2,754; China, £2,081; and from Japan, £458.

* Fuller details in regard to minerals in the Territory will be found in E. R. Stanley's Report on Salient Geological Features and Natural Resources of the Territory, (printed as Appendix B. to the Report for 1921–22).

2. **Principal Items of Import.**—The principal items of import during each of the last five years are given in the following table :—

TERRITORY OF NEW GUINEA.—IMPORTS, VALUE OF ITEMS, 1919-20 TO 1923-24.

Commodities.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
	£	£	£	£	£
Foodstuffs	190,442	241,280	113,238	181,492	137,638
Beverages (non-alcoholic) ..	(a)	2,429	1,360	2,235	6,428
Alcoholic Liquors	31,744	39,841	29,703	30,414	28,587
Tobacco	44,936	53,446	41,392	50,746	39,564
Live animals	1,429	845	4,276	1,351	1,114
Copra Sacks	(a)	20,555	23,152	15,701	18,428
Apparel	76,935	125,177	37,842	82,113	74,092
Oils	23,835	39,048	26,506	21,923	22,066
Hardware and Machinery ..	64,912	69,386	27,949	37,999(f)	52,347
Motor Cars and Accessories ..	(a)	20,141	11,953	14,579	8,604
Firearms, Ammunition, and Explosives	(a)	3,678	1,704	4,049	3,696
Timber and Building Materials	(a)	21,471	7,200	12,308	20,367
Paper and Stationery	1,225	4,366	4,459	5,918	7,082
Medicines and Drugs	5,414	10,300	10,290	18,919	11,529
Miscellaneous	65,895	9,478	17,687	33,002	50,710
Coal and Coke	(b)	(b)	(c)	4,106	3,382
Government Stores	(b)	(b)	110,000	(b)	(b)
Total	506,767(d)	661,441(d)	468,711(e)	516,853	485,634

(a) Not separately recorded. (b) Not recorded. (c) Not separately recorded, included in Government Stores. (d) Not including money or Government Stores. (e) Not including money. (f) Machinery included with Motor Cars.

3. **Principal Items of Export.**—Values of the principal items of export for the last five years are shown hereunder :—

TERRITORY OF NEW GUINEA.—EXPORTS, VALUE OF ITEMS, 1919-20 TO 1923-24.

Commodity.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
	£	£	£	£	£
Copra	745,057	641,045	474,110	619,715	686,519
Cocoa	15,530	9,105	9,465	3,734	3,602
Stone and Ivory Nuts	271	531	..	336	192
Rubber	1,104	2,900	..	..	..
Other Agricultural Products ..	2	20	..	..	..
Birds of Paradise and other Feathers	34,133	5,812	2,027	..	..
Mother of Pearl and other Marine Products	53,285	14,579	13,595	6,721	11,359
Gold .. ..	..	..	..	..	16,542
Miscellaneous	40	..	..	386	321
Total	849,422	673,992	499,197	630,892	718,535

4. **Exports of Copra, Cocoa, and Rubber.**—The next table shows the quantities, where available, of the exports of these items during the last five years :—

**TERRITORY OF NEW GUINEA.—EXPORTS OF COPRA, COCOA, AND RUBBER,
1919-20 TO 1923-24.**

Commodity.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
	Tons.	Tons.	Tons.	Tons.	Tons.
Copra	22,708	23,735	25,894	32,648	34,974
Cocoa	140	133	152	83	70
Rubber	(a)	29	..	..	..

(a) Not recorded.

Of the 34,974 tons of copra exported in 1923-24, 21,075 tons went to countries other than Australia.

§ 9. Shipping and Communication.

1. **General.**—A subsidized mail service between the Territory and Australia is maintained by Burns, Philp and Co. Ltd. Occasional cargo steamers take shipments of copra direct to European and American markets.

2. **Oversea Tonnage in 1923-24.**—The number and net tonnage of oversea vessels which entered and cleared the Territory during the year 1923-24 are shown hereunder :—

TERRITORY OF NEW GUINEA.—SHIPPING, 1923-24.

Nationality.	Entered.		Cleared.		Total.	
	No.	Net Tonnage.	No.	Net Tonnage.	No.	Net Tonnage.
British	31	60,413	27	56,653	58	117,066
Chinese	1	1,869	1	1,869	2	3,738
Japanese	1	267	..	..	1	267
Norwegian .. .. .	..	..	1	5,797	1	5,797
Swedish	1	4,460	1	4,460	2	8,920
Total	34	67,009	30	68,779	64	135,788

Country from which Entered or for which Cleared.	Entered.		Cleared.		Total.	
	No.	Net Tonnage.	No.	Net Tonnage.	No.	Net Tonnage.
United Kingdom	1	3,215	..	..	1	3,215
Australia	25	43,611	19	33,281	44	76,892
European Ports .. .. .	..	..	7	26,456	7	26,456
China	2	5,069	1	1,869	3	6,938
Japan .. .. .	..	..	1	3,292	1	3,292
U.S.A.	1	2,945	1	3,361	2	6,306
Singapore	1	4,077	..	..	1	4,077
Nauru	1	2,845	..	..	1	2,845
Solomon Islands	2	4,980	1	520	3	5,500
Caroline Islands	1	267	..	..	1	267
Total	34	67,009	30	68,779	64	135,788

3. **Local Shipping.**—The Administration maintains a service of small steamers which bring cargo from outports to the ports of call of the oversea vessels, while there are also privately owned schooners and launches.

4. **Land Communication.**—Means of communication on land are scanty. There are no railways. Roads lead from Rabaul to places within 30 or 40 miles, and there is a road 170 miles long in New Ireland. Elsewhere there are few roads outside plantations

and the stations of the District Officers. The large rivers of the mainland are as yet but little used.

There is a high power wireless station at Bita Paka near Rabaul, and low power stations at Kavieng, Kieta, Manus, Madang, Aitape, and Morobe. Since 1st July, 1921, all these have been placed under the control of Amalgamated Wireless (Australasia) Limited.

§ 10. Revenue and Expenditure.

1. Revenue.—Details of the revenue collected from various sources during each of the last five years are given hereunder:—

TERRITORY OF NEW GUINEA.—REVENUE, 1919-20 TO 1923-24.

Heading.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
Trade and Customs—	£	£	£	£	£
Imports	98,658	59,865	49,031	77,259	73,781
Exports		33,035	38,422	35,965	43,656
Total	98,658	92,900	87,453	113,224	117,437
Taxes and Fees—					
Licences	7,587	7,977	5,588	5,816	5,846
Business Tax	8,134	8,860	20,989	10,317	18,322
Law Department	2,282	1,416	1,942	2,205	1,488
Lands Department	11,382	4,438	6,858	3,132	6,717
Stamp Duties .. .. .	..	..	1,000	507	500
Native Affairs—					
Head Tax	11,210	15,522	20,546	21,550	21,451
Indenture Fees	3,856	2,580	1,689	(b)12,191	(b)8,605
Fees and Fines		240			
Income Tax .. .. .	..	..	209	644	677
Total	44,451	41,033	58,821	56,362	63,606
Miscellaneous—					
Trade and Customs	2,438	4,284	6,470	2,918	3,959
Post Office	4,061	3,852	6,348	2,328	4,040
Wireless Service	4,781	4,181	5,839	..	..
Receipts from Administration					
Shipping Services	28,061	23,921	36,599	26,951	15,532
Plantations	5,637	4,036	8,824	2,985	5,705
Hospital Receipts	3,027	4,845	2,884	7,148	10,785
Interest	81	164	..	..	..
Miscellaneous	10,965	14,741	(a)44,268	(a)29,815	(a)27,680
Total	59,051	60,024	111,232	72,145	67,701
GRAND TOTAL	202,160	193,957	257,506	241,731	248,744

(a) Including sale of stores.

(b) Including hire of labour.

2. Expenditure.—The expenditure for the financial year 1923-24 was distributed as follows:—

TERRITORY OF NEW GUINEA.—EXPENDITURE, 1923-24.

Secretary and Central Adminis- tration	£12,743	Public Works	£22,514
Government Printer	3,601	Trade and Customs	31,312
Justice	3,747	Agriculture	7,533
Treasury	41,032	Public Health	22,135
Audit	2,539	District Services	76,228
Lands and Survey	12,371	Miscellaneous	5,136
Native Affairs and Police	12,425	Total	253,316

F. NAURU.

1. **General.**—Nauru is an oval-shaped atoll about 12 miles in circumference having an area of 5,400 acres, of which approximately four-fifths is phosphate-bearing. It is situated in long. 166° E., and is 26 miles south of the Equator. Portion of the island between the sandy beach and the coral cliffs is fertile, and it is there that the native Nauruans have established themselves. With the exception of a small fringe round an inland lagoon, the plateau which contains the phosphate deposits possesses few food plants and is uninhabited, but portion of the area has been planted with fruit trees. The system of land tenure is governed by old custom, and, with the exception of small allotments held by the Government and Missions, the whole of the island is owned by individual natives. The climate is hot, but not unpleasant, the average shade temperature ranging between 72° and 95° F., and the average humidity between 70 and 80. The average rainfall is 120 inches, but droughts occasionally occur, and in 1916 and 1917 only 40 inches were received for the two years.

2. **History.**—The island was annexed by Germany in 1888, and prior to 1914, was part of the protectorate of German New Guinea.

In November, 1914, Nauru was occupied by a detachment from the Australian Expedition at Rabaul; and it was included in the cession of colonies made by Germany in 1919 to the Allied and Associated Powers, whose representatives agreed that a mandate over it should be given to His Majesty the King. On 2nd July, 1919, the British, Commonwealth, and New Zealand Governments agreed that the administration of the island (which, since 1915, had been in charge of an official appointed by the British Colonial Office) should be vested in an Administrator; the first Administrator was to be appointed for a term of five years by the Australian Government, and thereafter in such manner as the three Governments decided. This Agreement was approved by the Commonwealth Parliament in the Nauru Island Agreement Act 1919, and is printed in the Schedule to that Act, and the first Administrator appointed by the Commonwealth Government assumed duty in June, 1921.

The Mandate for Nauru, issued by the Council of the League of Nations in December, 1920, is in terms similar to that for the Territory of New Guinea.

3. **Administration.**—The Administrator has all the powers of government—administrative, legislative, and judicial—in the island. An Advisory Council has been created which consists of two Europeans chosen by the Administrator, and two native chiefs elected by the natives. All expenses of administration are met from local revenue. Native industries such as canoe-building, fishing, mat-making, etc., are encouraged by the provision of prizes at annual competitions. A branch of the Commonwealth Savings Bank has been established, and the deposits by natives in 1924 amounted to £4,154. There is a co-operative store managed by the natives themselves, the books, however, being audited by Government officers. Natives are not allowed to carry firearms, and the use by them of intoxicating liquors and deleterious drugs is prohibited.

4. **Population.**—Figures for population from 1920 to 1924 are given hereunder:—

NAURU.—POPULATION, 1920 TO 1924.●

Population.	1920.	Census of 24th April, 1921.	31st Decem- ber, 1922.	31st Decem- ber, 1923.	31st Decem- ber, 1924.
Europeans	91	119	128	110	125
Chinese	599	597	582	603	785
Nauruans(a)	1,068	1,084	1,156	1,179	1,219
Other South Sea Islanders ..	227	266	290	117	11

(a) The natives of Nauru are Micronesians.

The birth rate among the Nauruans in 1924 was 46 per 1,000, the death rate 27 per 1,000, and the rate of infantile mortality 357 per 1,000.

5. **Health.**—There is no malaria, but cases occur of other diseases known in the Pacific. Venereal disease is rare, but in 1924 there were 189 cases of leprosy in segregation, and a total of 284, or nearly 24 per cent., of the native population were under treatment. An area has been set apart for the segregation of lepers, and the latest methods of treatment are applied to cope with the disease. Two hospitals are maintained on the island, one by the Administration for Nauruans, and one by the European Phosphate Commission for its employees. In common with other natives, the Nauruans are very susceptible to tuberculosis and influenza, and in 1921 an influenza epidemic caused the deaths of 230 islanders. Dysentery, both amoebic and bacillary, is endemic. The usual steps are being taken by the authorities to improve the water supply and to provide efficient sanitation generally. A baby clinic has been established to give help and advice to Nauruan mothers in regard to infant nurture.

6. **Education.**—On the 1st October, 1923, the Administration took over the education of the Nauruans and other native children, and native schools were established in four districts. Previously education had been looked after by the Missions subsidized by the Government. A school for European children, 17 of whom were in attendance in 1924, is presided over by a teacher on loan from the Education Department of Victoria, who also supervises educational matters generally. The curriculum is similar to that of corresponding schools in Australia, and the teaching is, as far as possible, wholly in English. Education is compulsory between the ages of six and sixteen. Officers from the Missions visit the schools to give religious and moral training. A museum for the preservation of Nauruan antiquities is in process of formation.

7. **Religion.**—The London Missionary Society (Protestant) and the Sacred Heart of Jesus Mission (Roman Catholic) operate in Nauru, and in 1924 the adherents to the former numbered 782, and to the latter 342.

8. **Phosphate Deposits.**—(i) *General.* The deposits were discovered in 1900, and were worked by the Pacific Phosphate Company, which also worked the deposits on Ocean Island (about 165 miles east of Nauru and part of the Gilbert and Ellice Islands Colony administered by the Colonial office). The quantity on the two islands has been estimated at not less than 100,000,000 tons, and the rock phosphate, as shipped, averages 85 per cent. to 88 per cent. of tribasic phosphate of lime. About 4,000,000 tons have already been removed; the area worked or partly worked is only about 97 acres.

The interests of the Pacific Phosphate Company in the two islands (though not in other islands in the Pacific in which it has workings) were bought by the British, Commonwealth, and New Zealand Governments in 1919 for £3,500,000, the purchase money being contributed in the proportions of 42, 42, and 16 per cent. respectively. The Agreement of 2nd July, 1919, provides for the working of the deposits by the British Phosphate Commission of three members, one appointed by each Government; and the three countries are to receive the output in the same proportions of 42, 42, and 16 per cent.

(ii) *Output.* The output from the two islands in 1913, the last year before the war, was 350,000 tons. During the first three years of the Commission's management it was as follows:—

NAURU AND OCEAN ISLAND.—OUTPUT OF PHOSPHATES, 1921 TO 1923.

Year.	Total.	To Australia.	To New Zealand.	To United Kingdom.	To other Countries.
	Tons.	Per cent.	Per cent.	Per cent.	Per cent.
1920-21	364,251	72.96	4.69	4.59	17.76
1921-22	361,205	47.20	10.64	4.45	37.71
1922-23	311,650	65.43	16.54	..	18.03

From Nauru alone, during the calendar year 1924, the export was 280,990 tons, of which 200,770 tons went to Australia, and 80,220 tons to New Zealand.

(iii) *Accounts of Commission.* A statement for the three years ended June, 1923, is given hereunder.

NAURU AND OCEAN ISLAND.—SALES OF PHOSPHATES, 1920-21 TO 1922-23.

Receipts from Sales of Phosphate, Etc.	1920-21.	1921-22.	1922-23.
	£	£	£
Receipts from sales, etc.	691,643	823,045	542,348
F.o.b. cost, including interest on capital, Sinking fund, etc.	688,958	732,407	538,099

The f.o.b. cost of phosphate was 37s. 10d. in 1920-21, 40s. 7d. in 1921-22, and 34s. 6d. in 1922-23.

The amount due by the Commission to the partner Governments for purchase money and other capital sums was £3,666,457 on 30th June, 1921; by 30th June, 1922, this was reduced to £3,607,495; and by 30th June, 1923, to £3,492,776. The contribution to sinking fund paid by the Commission provides for interest at 6 per cent. and extinction of the capital sum in 50 years from 1st July, 1920.

(iv) *Charges for Phosphate.* Up to 30th June, 1922, the Commission's charge for phosphate landed in Australia was from 75s. to 80s. per ton: the price was reduced from 1st July, 1922, to 49s. 3d. in the Eastern States and 52s. 3d. in Western Australia. On 1st July, 1923, it was further reduced to 46s. in all States.

(v) *Employees.* The employees of the Commission at Nauru consist of 60 Europeans, 785 Chinese, and 11 natives of Pacific islands other than Nauru. A few Nauruans are from time to time employed, but they are not partial to sustained labour of any kind.

9. *Trade.*—Information regarding imports and exports for years 1920 to 1924 is appended herewith:—

NAURU.—IMPORTS AND EXPORTS, 1920 TO 1924.

Heading.	1920.	1921.	1922.	1923.	1924.
	£	£	£	£	£
Imports	109,119	106,486	78,320	53,685	100,254
Exports—	tons.	tons.	tons.	tons.	tons.
Phosphate	149,609	187,680	182,170	212,300	280,990
Copra	189	..	93	121	383

10. *Revenue and Expenditure.*—The revenue and expenditure of the Administration during the years 1920 to 1924 were as follows:—

NAURU.—REVENUE AND EXPENDITURE, 1920 TO 1924.

Heading.	1920.	1921.	1922.	1923.	1924.
	£	£	£	£	£
Revenue	10,611	10,192	11,182	11,837	18,200
Expenditure	4,818	12,712	11,424	10,266	13,580

Of the revenue in 1924, £6,689 was royalty on phosphate, £3,941 consisted of Customs dues, and £2,616 of post office receipts. The total credit balance on the 1st December, 1924, amounted to £21,587.

CHAPTER XVI.

PASTORAL PRODUCTION.

§ 1. Initiation and Growth of Pastoral Industry.

1. **Early Statistics.**—In earlier issues of the Year Book will be found a brief reference to the pastoral industry in Australia prior to the year 1860. (See Year Book No. 6, page 330).

2. **Subsequent Statistics.**—While the statistical records of live stock in Australia prior to the year 1860 are somewhat defective, from that year onwards fairly complete particulars are available for most of the States. At the present time, statistics of live stock are collected annually in all the States principally through the agency of the police, but in the years 1885 to 1888 inclusive, and 1893 to 1895 inclusive, these particulars were not collected in South Australia, and similar gaps occur in the Victorian records for the periods 1895 to 1899 inclusive, and 1901 to 1903. In order to obtain totals for Australia for these years the missing numbers have been supplied by interpolation. The results so obtained probably differ but slightly from the actual numbers for the respective years.

3. **Increase in Live Stock.**—Particulars concerning the numbers of each of the principal kinds of live stock in Australia at decennial intervals from 1860 to 1910, and from 1918 onwards in single years, are given in the following table, and are shown continuously in the graphs hereinafter.

During the sixty-three years covered by the table the live stock of Australia increased considerably, horses 439 per cent., cattle 237 per cent., sheep 298 per cent., and pigs 156 per cent. The average annual increases which these aggregates represent are as follows:—Horses 2.76 per cent.; cattle 1.98 per cent.; sheep 2.25 per cent.; and pigs, 1.53 per cent.

LIVE STOCK.—AUSTRALIA, 1860 TO 1923.

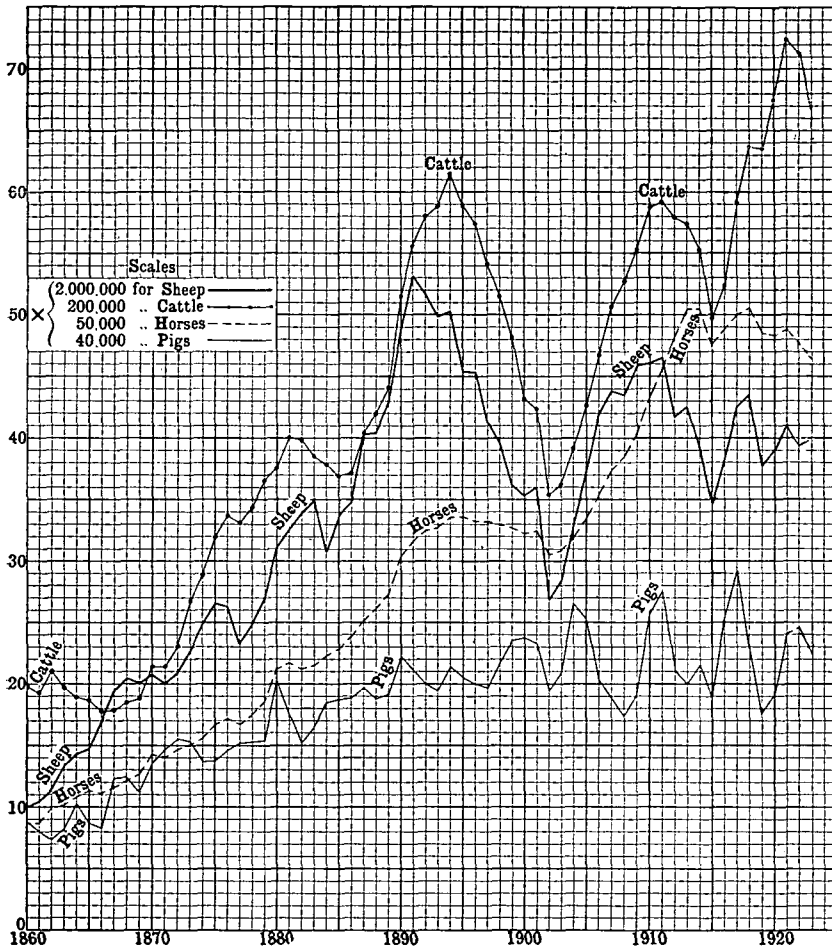
Year.	Horses.	Cattle.	Sheep.	Pigs.
1860	431,525	3,957,915	20,135,286	351,096
1870	716,772	4,276,326	41,593,612	543,388
1880	1,061,078	7,523,000	62,176,027	815,776
1890	1,521,588	10,299,913	97,881,221	891,138
1900	1,609,654	8,640,225	70,602,995	950,349
1910	2,165,866	11,744,714	92,047,015	1,025,850
1918	2,527,149	12,738,852	87,086,236	913,902
1919	2,421,201	12,711,067	75,554,082	695,968
1920	2,415,510	13,499,737	77,897,555	764,406
1921	2,438,182	14,441,309	82,226,470	960,385
1922	2,390,460	14,336,673	78,803,261	985,930
1923	2,327,440	13,357,508	80,110,461	897,874

4. **Fluctuations.**—The increases referred to, however, have not been continuous, marked fluctuations having taken place during the period, mainly on account of the droughts which have from time to time left their impress on the pastoral history of Australia. These were in evidence in 1869, 1877, 1884, 1895, and subsequent years, 1902, 1908, 1912, 1914–15, 1918 to 1920, and again in 1922–23, in which latter years the interior of the Continent experienced one of the driest periods on record, and the mortality of stock was heavy.

As an offset to these visitations, good seasons invariably supervene on the dry periods, and the large natural increases occurring under these conditions greatly facilitate the process of restocking, thus bearing convincing testimony to the extraordinary recuperative powers of the country.

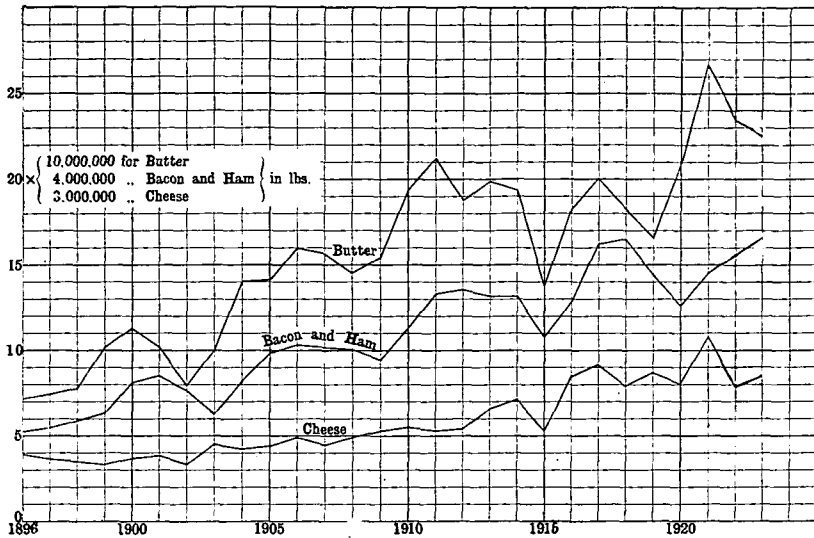
The years in which the numbers of live stock attained their maxima are as follows:—Horses, 1918, 2,527,149; cattle, 1921, 14,441,309; sheep, 1891, 106,421,068; and pigs, 1917, 1,169,365.

NUMBER OF HORSES, CATTLE, SHEEP, AND PIGS—AUSTRALIA, 1860 TO 1924.



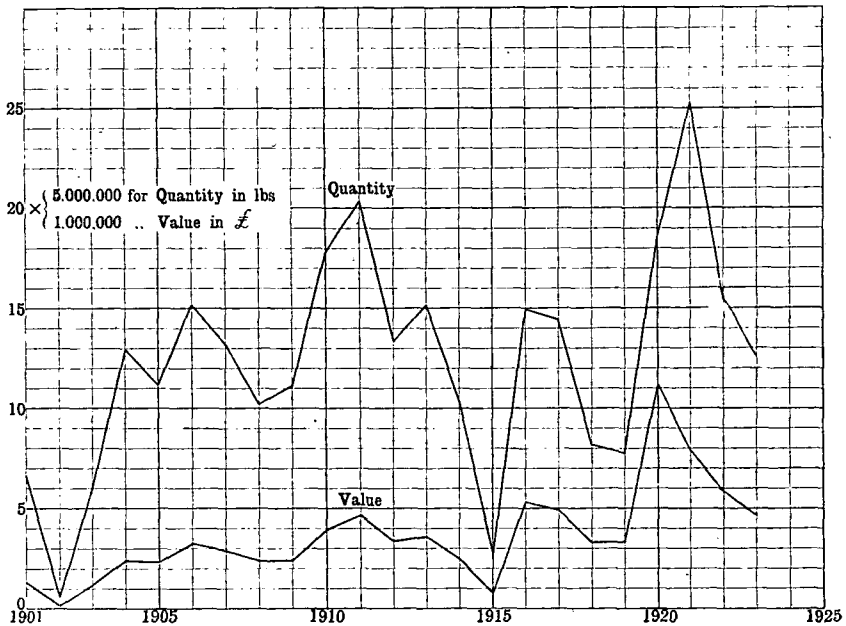
EXPLANATION.—The base of each small square represents an interval of one year, and the vertical side 2,000,000 in the case of sheep, 200,000 for cattle, 50,000 for horses, 40,000 for pigs.

PRODUCTION OF BUTTER AND CHEESE, AND BACON AND HAM—AUSTRALIA.
1896 TO 1923.



EXPLANATION.—The base of each small rectangle represents an interval of one year, and the vertical height of each denotes in the case of butter 10,000,000 lbs.; in the case of bacon and ham 4,000,000 lbs. and in the case of cheese 3,000,000 lbs.

QUANTITY AND VALUE OF NET EXPORTS OF BUTTER FROM AUSTRALIA, 1901 TO 1923.



EXPLANATION.—The base of each small rectangle represents an interval of one year, and the vertical height of each 5,000,000 lbs. in weight, or £1,000,000 in value.

5. **Live Stock in Relation to Population.**—The number of each kind of live stock per head of the population of Australia has varied during the past sixty-three years in the manner shown in the succeeding table:—

LIVE STOCK PER HEAD OF POPULATION—AUSTRALIA, 1860 TO 1923.

Year.	Horses.	Cattle.	Sheep.	Pigs.	Year.	Horses.	Cattle.	Sheep.	Pigs.
1860 ..	0.38	3.45	17.58	0.31	1918 ..	0.49	2.48	16.99	0.18
1870 ..	0.43	2.60	25.24	0.33	1919 ..	0.45	2.38	14.15	0.13
1880 ..	0.48	3.37	27.87	0.37	1920 ..	0.44	2.49	14.35	0.14
1890 ..	0.48	3.27	31.06	0.28	1921 ..	0.44	2.61	14.86	0.17
1900 ..	0.43	2.29	18.75	0.25	1922 ..	0.42	2.54	13.94	0.17
1910 ..	0.49	2.65	20.80	0.23	1923 ..	0.40	2.31	13.88	0.16

Considered in relation to population the most noticeable variations have been the largely reduced numbers of sheep and pigs in recent years, the reductions amounting to about one-half of the earlier figures. The number of cattle has also declined, and a decrease in the number of horses is in evidence since 1918.

6. **Live Stock in Relation to Area.**—The numbers of live stock per square mile in the several States and Territories of Australia are given in the following table:—

LIVE STOCK PER SQUARE MILE.

States and Territories.	Date.	Horses.	Cattle.	Sheep.	Pigs.
New South Wales ..	30th June, 1924 ..	2.12	9.48	120.89	1.04
Victoria ..	1st March, 1924 ..	5.53	18.11	125.84	2.96
Queensland ..	31st Dec., 1923 ..	0.98	9.54	24.99	0.20
South Australia ..	30th June, 1924 ..	0.68	1.09	17.36	0.19
Western Australia ..	31st Dec., 1923 ..	0.19	0.98	6.76	0.06
Tasmania ..	1st March, 1924 ..	1.43	8.41	59.42	1.80
Northern Territory ..	31st Dec., 1923 ..	0.09	1.61	0.01	0.00
Fed. Cap. Territory ..	30th June, 1924 ..	1.52	6.47	140.85	0.46
Total	1923-24	0.78	4.49	26.93	0.30

7. **Minor Classes of Live Stock.**—The numbers of minor classes of live stock returned for 1923-24 were as follows:—Goats, 228,398; camels, 11,107; mules and donkeys, 17,352; and ostriches, 691. Of these, goats were most numerous in Queensland; camels, mules and donkeys in Western Australia; and ostriches in South Australia. In the raising of goats, attention has in recent years been devoted to the angora goat and its product (mohair), and about 13,000 angora goats are included in the total of 228,398 goats shown above. Of these, 3,068 were in New South Wales, 1,070 in Tasmania, 991 in Western Australia, 942 in South Australia, and 3,931 in Queensland, while the quantity of mohair produced in the latter State in 1923 was set down at 2,204 lbs., and the number of skins placed on the market was returned as 625.

8. **Net Exports of Principal Pastoral Products.**—The quantities by which the exports of the principal pastoral products of Australia exceeded the imports for the years 1919-20 to 1923-24 are as follows:—

NET EXPORTS OF PASTORAL PRODUCTS.—AUSTRALIA, 1919-20 TO 1923-24.

Products.	Unit of Quantity.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
QUANTITIES.						
Animals (living)—						
Cattle	No.	3,133	4,398	9,110	13,818	— 71
Horses	"	5,787	8,195	1,798	3,545	1,478
Sheep	"	21,601	19,307	36,111	37,959	30,302
Bones	cwt.	29,198	24,160	21,718	23,276	26,158
Glue-pieces and Sinews	"	8,158	— 3,920	4,987	6,927	— 1,993
Glycerine	lb.	— 21,745	— 854,254	19,348	343,292	— 230,485
Hair	"	600,695	100,434	— 126,037	(a)	(a)
Hoofs	cwt.	11,382	7,580	10,615	11,174	10,380
Horns	"	(a)	(a)	(a)	(a)	(a)
Meats—						
Frozen Beef	lb.	120,939,750	179,618,149	124,158,191	152,925,321	105,145,255
Frozen Mutton and Lamb	"	246,957,427	54,892,764	91,712,280	167,578,967	39,768,347
Frozen Rabbits and Hares	pair	9,622,150	3,925,004	4,857,404	4,264,054	3,489,496
Frozen, Other	lb.	11,397,792	7,901,468	6,676,605	13,062,037	6,687,005
Potted and Extract of	"	(a)	(a)	(a)	(a)	(a)
Preserved in Tins, etc.	lb.	47,550,045	8,296,500	9,133,860	10,583,164	4,268,814
Other (excluding Bacon and Ham)	"	755,141	482,317	344,167	489,564	234,058
Sausage Casings	cwt.	(a)	(a)	(a)	24,623	13,213
Skins—						
Hides	No.	540,415	— 8,317	80,415	47,900	665,466
Sheep	"	10,143,952	5,117,431	6,780,522	10,237,162	6,891,162
Rabbit and Hare	cwt.	127,452	49,427	74,224	122,743	77,862
Other (including Undressed Furs)	"	(a)	(a)	(a)	(a)	(a)
Tallow	cwt.	712,307	524,220	893,772	1,016,831	394,313
Wool—						
Greasy	lb.	552,307,700	417,647,343	710,591,430	597,429,649	478,210,488
Scoured	"	84,900,446	61,525,697	102,346,835	106,319,965	41,735,194
Tops	"	6,148,118	6,598,631	6,200,505	6,374,922	4,988,258

NOTE.—The minus sign — signifies net imports. (a) Quantity not available.

The values of the net exports for the same five years are furnished in the next table, and amount to no less a total than £314,270,215 for the period, or an average of £62,854,043 per annum, of which wool represents 78 per cent. Meats, skins, and tallow rank next in order of importance.

NET EXPORTS OF PASTORAL PRODUCTS.—AUSTRALIA, 1919-20 TO 1923-24.

Products.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
VALUES.					
Animals (living)—	£	£	£	£	£
Cattle	— 23,855	30,350	53,274	64,731	— 31,430
Horses	117,739	137,497	— 1,148	27,978	— 36,741
Sheep	57,854	140,975	36,921	42,017	40,887
Bones	31,534	21,839	19,610	26,137	32,301
Glue-pieces and Sinews	15,340	302	7,883	13,725	21,688
Glycerine	1,351	— 39,374	1,516	8,536	— 5,965
Hair	66,943	28,416	6,736	— 62,830	— 70,283
Hoofs	14,526	8,180	7,120	8,137	7,723
Horns	52,383	29,609	34,418	35,388	32,888
Meats—					
Frozen Beef	2,474,904	3,819,094	1,867,681	1,794,104	1,301,304
Frozen Mutton and Lamb	5,482,263	1,578,634	2,139,537	4,320,977	1,169,667
Frozen Rabbits and Hares	762,936	432,745	407,143	321,329	320,442
Frozen, Other	305,948	190,795	128,451	189,170	95,127
Potted and Extract of	99,599	9,649	— 49,636	— 40,170	— 78,343
Preserved in Tins, etc.	2,778,503	380,694	324,275	266,273	94,094
Other (excluding Bacon and Ham)	37,845	16,741	10,852	10,577	5,798
Sausage Casings	212,427	— 43,160	128,127	285,504	154,068
Skins—					
Hides	1,089,731	— 113,202	122,471	249,208	338,263
Sheep	2,585,171	1,228,012	1,305,223	2,973,146	3,057,789
Rabbit and Hare	3,670,791	968,972	784,346	1,961,777	1,348,508
Other (including Undressed Furs)	2,268,748	715,656	288,633	785,467	798,166
Tallow	2,855,602	1,347,400	1,440,683	1,612,676	745,209
Wool—					
Greasy	38,414,608	25,298,176	38,970,130	45,769,295	48,294,399
Scoured	9,169,288	6,426,167	7,795,146	9,898,651	6,298,197
Tops	2,957,679	2,049,588	1,207,048	1,411,683	1,161,920
Total Values	75,499,858	44,663,755	57,036,440	71,974,486	65,095,676

NOTE.—The minus — sign signifies net imports.

§ 2. Horses.

1. **Suitability of Australia for Horse-breeding.**—From the earliest times the suitability of the climate and pastures of Australia for the production of serviceable breeds of horses has been fully recognized. By the importation of high-class sires, and the careful selection of breeding mares, these natural advantages are utilized to the fullest extent, all classes of horses being bred. As a consequence of this combination of advantages, the Australian horse, whether of the heavy draught, medium weight, or light saddle and carriage variety, compares more than favourably with the product of other lands. The Australian horse has been found suitable for the army in India, and large numbers are obtained annually for remount purposes. During the recent war, Australian horses were found to be well adapted for all purposes, especially in Palestine.

2. **Distribution throughout Australia.**—As regards numbers, the State of New South Wales, the earliest settled of the group, established a lead, which it retained till the year 1914, when it gave place to Queensland, where rapid progress had been in evidence during the previous decade. New South Wales regained the lead during the next three seasons, but Queensland again replaced the latter State in 1919, and has maintained its position during the past five seasons. Particulars of the several States for the past five years are as follows:—

HORSES—NUMBER, 1919 TO 1923.

Year.	N.S.W. (b)	Vic. (a)	Q'land.	S. Aust. (b)	W. Aust.	Tas. (a)	N.T.	F.C.T. (b)	Total.
1919	660,751	513,500	730,326	264,901	174,919	39,452	35,839	1,513	2,421,201
1920	661,846	487,503	741,024	268,187	178,664	39,117	37,837	1,332	2,415,510
1921	668,501	496,124	746,281	267,639	180,334	38,439	39,565	1,299	2,438,182
1922	658,686	494,947	713,015	264,150	181,159	37,313	39,845	1,345	2,390,460
1923	656,939	486,075	660,387	258,489	181,944	37,570	44,603	1,433	2,327,440

(a) 1st March year following.

(b) 30th June year following.

The number of horses attained its maximum in Australia during 1918, when 2,527,149 were recorded. Since that date, however, a gradual decline has taken place in all the States, except Western Australia and Northern Territory, the decrease for Australia during the period amounting to 199,709.

Particulars regarding the number of horses in Australia from 1860 onwards, may be ascertained from the graph herein.

3. **Proportions in the Several States and Territories.**—The percentages of the number of horses in the several States and Territories on the total for Australia for the past five years are as follows:—

HORSES.—PERCENTAGE IN EACH STATE, 1919 TO 1923.

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	F.C.T.	Total.
	%	%	%	%	%	%	%	%	%
1919 ..	27.29	21.21	30.16	10.94	7.23	1.63	1.48	0.06	100.00
1920 ..	27.40	20.18	30.68	11.10	7.40	1.62	1.57	0.05	100.00
1921 ..	27.42	20.35	30.61	10.98	7.40	1.57	1.62	0.05	100.00
1922 ..	27.55	20.70	29.83	11.05	7.58	1.56	1.67	0.06	100.00
1923 ..	28.23	20.88	28.37	11.11	7.82	1.61	1.92	0.06	100.00

The relative changes in distribution are insignificant, the only alteration during the last four years being a decrease of $1\frac{1}{2}$ per cent. in Queensland, occasioned by increases in New South Wales, Western Australia and the Northern Territory.

4. **Relation to Population.**—In proportion to population, horses are much more numerous in the Northern Territory than in any other of the principal divisions of Australia. Queensland is next in order, while Tasmania has the smallest number of

horses per head. The number per head of population has declined in all the statistical divisions, with the exception of Northern Territory, since 1919. Particulars for the past five years are as follows :—

HORSES.—NUMBER PER HEAD OF POPULATION, 1919 TO 1923.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N. Ter.	Fed. Cap. Ter.	All States.
1919 ..	0.32	0.34	0.99	0.54	0.53	0.19	7.88	0.68	0.45
1920 ..	0.31	0.32	0.99	0.54	0.54	0.18	9.48	0.52	0.44
1921 ..	0.31	0.32	0.97	0.53	0.54	0.18	10.59	0.45	0.44
1922 ..	0.30	0.31	0.90	0.51	0.53	0.17	11.22	0.41	0.42
1923 ..	0.30	0.30	0.81	0.49	0.51	0.17	12.55	0.39	0.40

5. Comparison with other Countries.—The number of horses in some of the leading horse-breeding countries of the world, according to the latest available returns, is as follows :—

HORSES.—NUMBER IN PRINCIPAL COUNTRIES.

Country.	Date.	Number of Horses ('000 omitted.)	Country.	Date.	Number of Horses ('000 omitted.)
Soviet Republics ..	1924	22,100	Hungary ..	1922	717
U.S. of America ..	1924	17,589	Dutch East Indies..	1921	702
Argentine Republic..	1921	9,432	Spain ..	1924	634
Brazil ..	1920	5,254	Turkey ..	1919	630
China ..	1916	4,401	Czecho-Slovakia ..	1920	592
Germany ..	1924	3,850	Uruguay ..	1919	555
Canada ..	1924	3,546	Denmark ..	1924	548
Poland ..	1921	3,263	Colombia ..	1915	526
France ..	1923	2,848	India (Native States)	1922	515
Australia ..	1923	2,327	Mexico ..	1923	512
Rumania ..	1923	1,828	Paraguay ..	1919	490
India (British) ..	1922	1,684	Lithuania ..	1924	482
Japan ..	1922	1,576	Finland ..	1923	400
United Kingdom ..	1924	1,529	Bulgaria ..	1920	399
Jugo-Slavia ..	1923	1,034	Irish Free State ..	1924	389
Italy ..	1919	990	Netherlands ..	1921	364
Union of South Africa	1921	920	Latvia ..	1924	340
Cuba ..	1923	844	New Zealand ..	1924	330
Sweden ..	1920	728	Chile ..	1922	329

6. Oversea Trade in Horses.—(i) *Exports.* Australia's export trade in horses is not nearly as large as formerly, and is somewhat fluctuating. During the past five years it has varied in number between 8,302 in 1920-21 and 1,785 in 1923-24, and in value between £186,943 in the former and £59,799 during the latter year. The total number of horses exported during the five years amounted to 21,955, valued at £591,456, or equal to an annual average of 4,391 for £118,291. The average export price for the period was £26 18s. 9d. Nearly 75 per cent. of the horses exported went to India, where they are largely used for remount purposes.

(ii) *Imports.* The number of horses imported into Australia is comparatively small, consisting mainly of valuable animals introduced for breeding purposes, principally from the United Kingdom and New Zealand. The average value per head of the horses imported during the last five years was £300 9s. 3d., as compared with £26 18s. 9d. per head for the exports for the same period. The average number imported per annum was, however, only 230, and the average annual value, £69,226. The following table gives the imports, exports, and net exports of horses during each of the years from 1919-20 to 1923-24 :—

HORSES.—IMPORTS AND EXPORTS, AUSTRALIA, 1919-20 TO 1923-24.

Year.	Imports.		Exports.		Net Exports.	
	No.	Value.	No.	Value.	No.	Value.
		£		£		£
1919-20	152	49,078	5,939	166,817	5,787	117,739
1920-21	107	49,446	8,302	186,943	8,195	137,497
1921-22	277	69,382	2,075	68,234	1,798	- 1,148
1922-23	309	81,685	3,854	109,663	3,545	27,978
1923-24	307	96,540	1,785	59,799	1,478	- 36,741

NOTE.—The minus sign — signifies net imports.

§ 3. Cattle.

1. Purposes for which Raised.—In all the States, cattle-raising is carried out on a more or less extensive scale, the main object in certain districts being the production of stock suitable for slaughtering purposes, and in others the raising of profitable dairy herds. The great impetus which the development of the export trade in Australian butter gave to the dairying industry led to a considerable increase in numbers and improvement in quality of the dairy herds of Victoria, New South Wales, and Southern Queensland in particular, the portion of Australia in the temperate zone being the best adapted to this industry. On the other hand, by far the finest specimens of beef-producing cattle are those raised in the tropical districts, i.e., in the northern parts of Queensland, in the Northern Territory, and in the Kimberley districts in the north of Western Australia.

2. Distribution throughout Australia.—Until 1880 New South Wales occupied the leading position as a cattle-raising State, but in that year Queensland took first place, which it has since maintained. The graph herewith shows a rapid increase in the number of cattle in Australia up to the year 1894, when 12,311,617 head were depastured. From 1895 onwards, however, the effects of droughts and the ravages of tick fever reduced the number to 7,062,742 in 1902. Following the disastrous drought which terminated in the latter year, the herds were gradually built up, and despite recurring droughts, they continued to increase in recent years until the maximum number of 14,441,309 cattle was attained in 1921. The decline in the frozen beef trade and the drought of 1922-23, which particularly affected the beef cattle areas of New South Wales and Queensland, were mainly responsible for the heavy decreases recorded in both these States during the past two years.

The numbers of cattle in the several States and Territories during each of the last five years are as follows:—

CATTLE.—NUMBER, 1919 TO 1923.

Year.	N.S.W. (b)	Victoria. (a)	Q'land.	S. Aust. (b)	W. Aust.	Tas. (a)	Nor. Ter.	Fed. Cap. Ter. (b)	Total.
1919	3,075,954	1,631,120	5,940,433	349,562	880,644	214,442	610,534	8,378	12,711,067
1920	3,367,880	1,575,159	6,455,067	376,399	849,803	208,202	659,840	7,387	13,499,737
1921	3,538,240	1,750,369	7,047,370	419,197	893,108	216,704	568,031	8,290	14,441,309
1922	3,244,905	1,785,660	6,955,463	425,811	939,596	218,197	760,766	6,275	14,336,673
1923	2,932,437	1,591,367	6,396,514	413,272	953,764	220,351	843,718	6,085	13,357,508

(a) 1st March year following. (b) 30th June year following.

3. Proportion in each State.—Percentages showing the relative importance of the various cattle-breeding States during the years 1919 to 1923 are given hereunder:—

CATTLE.—PERCENTAGE IN EACH STATE, 1919 TO 1923.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Ter.	Fed. Cap. Ter.	Total.
	%	%	%	%	%	%	%	%	%
1919 ..	24.20	12.83	46.73	2.75	6.93	1.69	4.80	0.07	100.00
1920 ..	24.95	11.67	47.82	2.79	6.29	1.54	4.89	0.05	100.00
1921 ..	24.50	12.12	48.80	2.90	6.19	1.50	3.93	0.06	100.00
1922 ..	22.63	12.46	48.52	2.97	6.55	1.52	5.31	0.04	100.00
1923 ..	21.95	11.91	47.89	3.09	7.14	1.65	6.32	0.05	100.00

Queensland contains within its borders nearly one half of the cattle-herds of Australia. Despite decreases during the past two seasons the percentage of cattle in Queensland on the total for Australia amounted to 47.89 in 1923. The largest relative gain since 1919 occurred in the Northern Territory, where the number has considerably increased in recent years.

4. Relation to Population.—The number of cattle per head of population differs considerably in the several States, as may be seen from the following table :—

CATTLE.—NUMBER PER HEAD OF POPULATION, 1919 TO 1923.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Ter.	Fed. Cap. Ter.	All States.
1919 ..	1.49	1.09	8.05	0.72	2.69	1.02	134.27	3.77	2.38
1920 ..	1.60	1.03	8.58	0.76	2.57	0.98	165.29	2.86	2.49
1921 ..	1.65	1.12	9.15	0.83	2.66	0.99	152.00	2.84	2.61
1922 ..	1.48	1.12	8.82	0.82	2.73	1.00	214.24	1.93	2.54
1923 ..	1.32	0.98	7.89	0.78	2.70	1.01	237.33	1.65	2.31

The maintenance of the ratio of cattle to population during the last four years must be regarded as highly satisfactory, in view of the depressed state of the beef export industry and the effects of the recent drought.

5. Comparison with other Countries.—In the following comparison of the herds of Australia with those of some of the principal cattle-raising countries of the world, the latest available figures have been inserted in each case :—

CATTLE.—NUMBER IN VARIOUS COUNTRIES.

Country.	Date.	No. of Cattle (,000 omitted).	Country.	Date.	No. of Cattle (,000 omitted).
India (British) ..	1922	116,665	Czecho-Slovakia ..	1920	4,391
U.S. of America ..	1924	64,928	Irish Free State ..	1923	4,194
Soviet Republics ..	1924	46,200	Jugo-Slavia ..	1923	4,053
Argentine Republic ..	1922	37,065	Tanganyika Territory	1923	3,800
Brazil ..	1920	34,271	Dutch East Indies ..	1921	3,791
India (Native States) ..	1922	26,512	Turkey ..	1919	3,740
Germany ..	1923	17,296	New Zealand ..	1924	3,563
China ..	1921	15,973	Spain ..	1924	3,436
France ..	1924	14,024	Kenya ..	1923	3,190
Australia ..	1923	13,358	Indo-China ..	1921	3,099
Colombia ..	1922	9,428	Siam ..	1923	2,972
Canada ..	1924	9,159	French Equatorial and West Africa ..	1922	2,950
Union of South Africa ..	1921	8,557	Nigeria ..	1922	2,910
Uruguay ..	1924	8,432	Sweden ..	1920	2,736
Poland ..	1921	7,967	Denmark ..	1924	2,666
Madagascar ..	1922	7,819	Venezuela ..	1921	2,600
United Kingdom ..	1923	7,794	Mexico ..	1923	2,363
Italy ..	1919	6,239	Austria ..	1923	2,163
Rumania ..	1923	5,554	Netherlands ..	1921	2,063
Paraguay ..	1919	5,500			
Cuba ..	1923	5,085			

6. Imports and Exports of Cattle.—Although the various products of the cattle-raising industry bulk largely in the export trade of Australia, the export of live cattle has never been considerable. The number of cattle imported is also small, consisting, as in the case of horses, mainly of valuable animals for breeding. Details are as follows:—

CATTLE.—IMPORTS AND EXPORTS, AUSTRALIA, 1919-20 TO 1923-24.

Year.	Imports.		Exports.		Net Exports.	
	No.	Value.	No.	Value.	No.	Value.
		£		£		£
1919-20 ..	337	55,656	3,470	31,801	3,133	-23,855
1920-21 ..	127	10,979	4,523	41,329	4,396	30,350
1921-22 ..	108	10,769	9,218	64,043	9,110	53,274
1922-23 ..	147	18,856	13,965	83,587	13,818	64,731
1923-24 ..	2,683	46,684	2,612	15,254	-71	-31,430

NOTE.—The minus sign — signifies net imports.

The importation of fat cattle from New Zealand for the Melbourne market was the cause of the relatively large import in 1923-24. Omitting these unusual shipments the average value of the cattle imported during the last five years was £134 2s. 10d. per head, while the average value of the cattle exported during the same period was £6 19s. 9d. As stated previously, the imported cattle were required principally for stud purposes.

7. Cattle Slaughtered.—The number of cattle slaughtered during each of the years 1919 to 1923 is given hereunder:—

CATTLE (INCLUDING CALVES) SLAUGHTERED, 1919 TO 1923.

Year.	N.S.W. (a)	Victoria.	Q'land.	S. Aust. (a)	W. Aust.	Tas.	N. Ter.	Fed. Cap. Ter. (a)	Total.
1919	593,859	362,475	461,197	85,978	55,056	15,753	23,286	138	1,597,742
1920	525,981	374,545	449,103	90,944	68,055	27,468	1,330	74	1,537,500
1921	631,699	331,707	499,992	95,323	54,640	33,566	2,445	90	1,649,462
1922	738,908	424,199	504,394	127,294	79,823	31,026	1,587	142	1,907,373
1923	752,376	461,958	566,452	140,979	90,833	33,729	2,500	113	2,048,940

(a) For year ended 30th June of year following.

8. Production and Consumption of Beef.—The production of beef in Australia during the three years ended 1923-24 was estimated at 942,939,000 lbs. per annum. The requirements of the local market absorbed 809,130,000 lbs., or nearly 86 per cent. leaving a balance of slightly more than 14 per cent., which was exported as frozen and canned beef. The annual consumption of beef per head of population in Australia averaged 143.70 lbs. compared with 68.00 lbs. in the United States of America, and 64.03 lbs. in the United Kingdom for the same period.

9. Export of Beef Preserved by Cold Process.—A large export trade in beef preserved by cold process is carried on by Australia in normal times, mainly with the United Kingdom, Egypt, and the Philippine Islands. The quantities so exported during the five years 1919-20 to 1923-24 were as follows:—

BEEF PRESERVED BY COLD PROCESS.—EXPORTS, AUSTRALIA, 1919-20 TO 1923-24.

Country to which Exported.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.	Total for 5 years.
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QUANTITY.

	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.
United Kingdom ..	105,725,679	156,316,163	108,671,867	112,316,545	62,286,753	545,317,007
Egypt ..	6,616,637	10,202,633	1,904,187	5,228,357	3,242,520	27,194,334
Philippine Islands ..	2,928,722	2,479,724	8,093,851	4,780,134	8,442,695	26,725,126
Germany ..	2,366,035	3,305,162	2,392,991	17,321,705	5,437,988	22,759,693
Malaya (British) ..	2,104,769	2,437,135	554,698	2,215,561	1,908,621	12,188,370
Hawaiian Islands ..	..	3,096,341	..	2,089,605	230,274	7,416,481
Italy ..	..	..	..	67,315	8,511,922	11,675,578
Belgium ..	..	..	..	2,452,475	7,728,342	10,180,817
Hong Kong ..	467,974	849,904	610,785	511,417	1,444,881	3,884,961
Ceylon ..	405,347	530,636	322,010	458,739	319,546	2,034,278
United States ..	301,673	133,304	71,615	99,878	..	606,470
Other Countries ..	162,075	291,477	1,545,349	5,410,936	5,610,398	13,020,235
Total ..	121,078,911	179,642,479	124,167,353	152,950,667	105,163,940	683,003,350

BEEF PRESERVED BY COLD PROCESS.—EXPORTS, AUSTRALIA—continued

Country to which Exported	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.	Total for 5 years.
VALUE.						
United Kingdom ..	£ 2,130,527	£ 3,302,283	£ 1,616,075	£ 1,285,049	£ 734,814	£ 9,068,748
Egypt ..	133,583	207,643	24,431	67,684	45,858	479,199
Philippine Islands ..	65,331	56,032	133,696	60,843	105,971	421,873
Germany ..	..	..	..	202,119	65,054	267,173
Malaya (British) ..	53,363	71,099	44,687	34,552	28,980	232,681
Hawallian Islands ..	62,818	77,784	7,280	28,412	3,955	180,249
Italy ..	..	62,575	..	842	115,819	179,236
Belgium ..	..	..	..	27,314	96,270	123,584
Hong Kong ..	10,426	18,553	11,117	6,771	19,537	66,404
Ceylon ..	11,539	13,478	6,111	8,455	6,405	45,988
United States ..	7,422	3,429	1,130	1,263	..	13,250
Other Countries ..	4,239	6,965	23,400	71,425	79,216	185,245
Total ..	2,479,248	3,819,841	1,867,927	1,794,735	1,301,879	11,263,630

During the five years under review the United Kingdom has been Australia's largest customer for frozen beef, and has taken more than 80 per cent. of the value of the total shipments. Egypt, the Philippine Islands and Malaya (British) ranked next in order of importance. The exporting States during 1923-24 were:—Queensland, 90,100,997 lbs., valued at £1,098,761; Western Australia, 10,646,717 lbs., valued at £135,938; New South Wales, 2,339,961 lbs., valued at £41,100; Victoria, 1,811,145 lbs., valued at £22,944; and South Australia, 265,120 lbs., valued at £3,136.

10. Beef Subsidy.—The prices ruling for frozen beef in England early in 1922 were so low that it became unprofitable to export Australian beef. A succession of good seasons had stocked the country to capacity, and the failure of the export treatment works to absorb the surplus greatly depressed the beef industry. In order to assist cattle growers, the Commonwealth Government in September, 1922, passed the Meat Export Bounties Act which provided for the payment of a subsidy of $\frac{1}{4}$ d. per lb. on all frozen or canned beef exported or placed in cool stores for export, and 10s. per head on live cattle exported for slaughter, from April to December, 1922. The granting of the subsidy was made conditional on reductions of $\frac{1}{4}$ d. per lb. being effected in both the cost of treating and of shipping the meat. The bounty was renewed in 1923 on similar conditions to those in 1922. Although the amount of the bounty was small, it gave an acceptable measure of relief to the cattle industry. Many of the works were able to operate, and more than 200,000 head of cattle were treated each year, which would otherwise have remained to accentuate the existing depression. The bounty paid during 1922 amounted to £117,245 17s. 5d. for frozen beef, and £4,521 10s. for live cattle, while in 1923 £137,939, including £1,039 paid in 1924-25, was distributed for frozen beef, and £3,632 for live cattle. The Government decided to discontinue the bounty on frozen and canned beef exported during the 1924 season, but the provision for live cattle exported for slaughter was again renewed, and £3,991 was paid in respect of such shipments.

§ 4. Sheep.

1. Initiation of the Pastoral Industry.—Fortunately for Australia, the suitability of its climate and general conditions for the production of a high class of wool was, at an early date in the history of its settlement, surmised and tested by Captain Macarthur, one of the pioneer sheep-breeders of New South Wales. To the energy of this enterprising pastoralist is due in large measure the rapid and extremely satisfactory development of Australia as a producer of fine wool, and, while it would appear that the introduction of the merino sheep into Australia was not due to Macarthur, a great deal of the credit for having successfully established the pastoral industry in Australia must certainly be his.

2. Distribution throughout Australia.—With the exception of a short period in the early sixties, when the flocks of Victoria outnumbered those of the mother State, New South Wales has maintained the lead in sheep-raising which naturally attached to it as the portion of Australia in which settlement was first effected. From 1878 to 1901, the number of sheep in New South Wales represented more than half the total for Australia, but in recent years the proportion has fallen away considerably.

Fluctuations in the number of sheep recorded for each year in Australia from 1860 onwards may be seen from the graph accompanying this chapter. Five marked periods of decline greatly reduced the numbers at successive intervals, but these losses were quickly regained, and, despite a decrease of 3½ million during the drought of 1922, the number reported in 1923 amounted to more than 80,000,000. Although final figures will not be available for some time, the preliminary reports received suggest that the number of sheep in Australia at the end of 1924 will reach and possibly exceed 85,000,000. In 1891 the number attained its maximum, viz., 106,421,068. There has been no approach to that figure in recent years, but it is generally considered that the flocks in 1891 were in excess of the reasonable sheep-carrying capacity of the country. The rapid growth of the frozen mutton and lamb industry precludes the building up of Australia's flocks to such large dimensions as heretofore, and it appears unlikely that the 1891 figure will be approached in the immediate future.

The number of sheep in the several States and Territories for each year from 1919 to 1923 was as follows:—

SHEEP.—NUMBER, 1919 TO 1923.

Year.	New South Wales. (b)	Victoria. (a)	Queensland.	South Australia. (b)	Western Australia.	Tasmania. (a)	Nor. Ter.	Fed. Cap. Ter. (b)	Total.
1919	29,077,514	14,422,745	17,379,332	6,014,565	6,697,951	1,781,425	8,811	171,739	75,554,082
1920	33,691,838	12,171,084	17,404,840	6,359,944	6,532,965	1,570,832	6,062	159,990	77,897,555
1921	37,025,716	12,325,818	18,402,399	6,257,052	6,506,177	1,551,273	6,349	151,686	82,226,470
1922	34,723,684	11,765,520	17,641,071	6,305,133	6,664,135	1,558,494	6,161	139,063	78,803,261
1923	37,407,013	11,059,761	16,756,101	6,596,875	6,595,867	1,557,716	4,728	132,400	80,110,461

(a) 1st March, year following.

(b) 30th June, year following.

3. Proportion in the Several States and Territories.—Particulars concerning the relative positions of the several States and Territories with respect to the total flocks of Australia during the years 1919 to 1923 are given hereunder:—

SHEEP.—PERCENTAGE IN EACH STATE, 1919 TO 1923.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N. Ter.	Fed. Cap. Ter.	Total.
	%	%	%	%	%	%	%	%	%
1919	38.49	19.09	23.00	7.96	8.86	2.36	0.01	0.23	100.00
1920	43.25	15.62	22.34	8.16	8.39	2.02	0.01	0.21	100.00
1921	45.03	14.99	22.38	7.61	7.91	1.89	0.01	0.18	100.00
1922	44.06	14.93	22.38	8.00	8.46	1.98	0.01	0.18	100.00
1923	46.69	13.81	20.92	8.23	8.23	1.94	0.01	0.17	100.00

Apart from the effect of drought the percentage of sheep depastured in the different States changes little. The most noteworthy alteration was a gain of 8.20 per cent. in New South Wales at the expense of Queensland and Victoria. The percentage decrease in the latter State amounted to 5.28 as the result of a loss of 3,362,984 sheep since 1919.

4. Relation to Population.—The relation of the flocks of the several States and Territories to the population at the end of each year from 1919 to 1923 is as follows:—

SHEEP.—NUMBER PER HEAD OF POPULATION, 1919 TO 1923.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N. Ter.	Fed. Cap. Ter.	All States.
1919	14.07	9.59	23.56	12.36	20.46	8.48	1.94	77.29	14.15
1920	16.03	7.96	23.14	12.78	19.75	7.38	1.52	62.04	14.35
1921	17.24	7.95	23.90	12.39	19.41	7.10	1.70	52.05	14.86
1922	15.86	7.40	22.38	12.20	19.39	7.12	1.74	42.72	13.94
1923	16.80	6.80	20.66	12.47	18.64	7.11	1.33	35.97	13.88

The ratio of sheep to population has declined since 1919, and the effects of dry seasons and the requirements of the frozen meat trade will make it difficult under present conditions to maintain the existing ratio in the future.

5. Comparison with other Countries.—As regards the size of its flocks, and the quantity and quality of wool produced, Australia has long occupied a leading position amongst the sheep-raising countries of the world. From estimates published in the Year Book of the International Institute of Agriculture it would appear that the approximate number of sheep in the world is in the neighbourhood of 550,000,000, to which total Australia contributes about 15 per cent. The following comparison taken mainly from the source indicated gives the latest available figures relative to the number of sheep in the principal wool-producing countries:—

SHEEP.—NUMBER IN VARIOUS COUNTRIES.

Country.	Date.	No. of Sheep (,000 omitted).	Country.	Date.	No. of Sheep (,000 omitted).
Australia ..	1923	80,110	Algeria ..	1923	8,991
Soviet Republics ..	1923	55,227	Bulgaria ..	1920	8,923
U.S. of America ..	1924	39,134	Brazil ..	1920	7,933
Argentine Republic ..	1922	36,209	Jugo-Slavia ..	1923	7,542
Union of South Africa ..	1921	31,730	French Morocco ..	1923	7,121
New Zealand ..	1924	23,585	Greece ..	1920	5,811
China ..	1916	22,232	Germany ..	1923	5,717
India (British) ..	1922	22,082	Chile ..	1922	4,569
United Kingdom ..	1923	21,156	Tanganyika Territory (a) ..	1923	3,940
Spain ..	1924	18,460	Portugal ..	1920	3,851
Uruguay ..	1923	17,510	Irish Free State ..	1924	3,128
Rumania ..	1923	12,481	Canada ..	1924	2,631
India (Native States) ..	1922	11,930	Kenya ..	1923	2,400
Italy ..	1919	11,754	French Soudan ..	1923	2,324
Peru ..	1922	11,334	Poland ..	1921	2,192
Turkey ..	1919	11,200	Syria ..	1923	2,047
France ..	1924	10,172			

(a) Including goats.

6. Oversea Imports and Exports of Sheep.—As in the case of cattle, the oversea exports of live sheep from Australia are of comparatively small importance. During the past five years the principal consignments of ordinary sheep have been made to Malaya (British) from the State of Western Australia. The purchases by South African and Japanese buyers at the Australian Stud Sheep Sales during recent years have opened up a regular export trade with these two countries in stud sheep, the bulk of which have been secured from the leading flocks of New South Wales, Victoria and South Australia. The following are particulars of the imports and exports for the years 1919–20 to 1923–24:—

SHEEP.—IMPORTS AND EXPORTS, AUSTRALIA, 1919–20 TO 1923–24.

Year.	Imports.		Exports.		Net Exports.	
	No.	Value.	No.	Value.	No.	Value.
		£		£		£
1919–20 ..	269	6,258	21,870	64,112	21,601	57,854
1920–21 ..	3,038	8,828	22,345	149,803	19,307	140,975
1921–22 ..	345	4,836	36,456	41,757	36,111	36,921
1922–23 ..	235	3,378	38,194	45,395	37,959	42,017
1923–24 ..	1,021	8,487	31,323	49,374	30,302	40,887

7. Sheep Slaughtered.—The number of sheep slaughtered in the several States during each of the years from 1919 to 1923 was as follows:—

SHEEP (INCLUDING LAMBS) SLAUGHTERED, 1919 TO 1923.

Year.	N.S.W. (b)	Victoria.	Q'land.	S. Aust. (b)	W. Aust.	Tas. (a)	Nor. Ter.	Fed. Cap. Ter.(b)	Total.
1919 ..	5,533,484	6,324,490	717,191	1,478,557	800,252	330,000	c100	3,800	15,187,874
1920 ..	3,847,498	4,244,798	461,449	1,058,977	839,963	387,346	c100	3,765	10,843,896
1921 ..	5,226,516	4,005,587	769,360	1,208,347	871,831	362,871	30	3,333	12,447,875
1922 ..	5,662,953	5,863,195	762,540	1,290,669	900,128	344,989	..	3,323	14,827,797
1923 ..	3,614,457	4,078,273	618,127	956,140	809,379	316,438	..	2,898	10,395,712

(a) Partly estimated.

(b) Year ended 30th June year following.

(c) Estimated.

8. Production and Consumption of Mutton and Lamb.—The annual production of mutton and lamb during the three years ended 1923–24 averaged 507,211,000 lbs., of which 405,373,000 lbs., or 79.9 per cent., was consumed locally, the balance of 21.1 per cent. being exported. The consumption of mutton and lamb in Australia during the same period amounted to 71.99 lbs. per head per annum, a figure considerably in excess of the consumption in the United Kingdom and the United States of America, where the quantity consumed amounted to 26.52 and 5.50 lbs. per annum respectively during the past three years.

9. Exports of Mutton and Lamb Preserved by Cold Process.—The export trade in mutton and lamb preserved by cold process grew rapidly until in 1913, the year immediately before the war, the value of the shipments amounted to nearly £3,000,000. The exports fell off considerably during the war years, but, resultant on the release of shipping space, coupled with the satisfactory prices realized in England, the record shipment of 246,971,346 lbs., valued at £5,482,564, was made in 1919–20. The dearth of supplies consequent upon the drought greatly diminished the consignments in 1920–21, but the trade expanded in 1921–22, and an exceptionally large volume of exports was despatched in 1922–23. The heavy export of the previous season and the losses due to adverse conditions, as well as a poor lambing, were responsible for the greatly reduced shipments during 1923–24. The position was further accentuated through the very high prices for wool causing graziers to be unwilling to dispose of anything that could grow a fair fleece. Considerable attention is paid to the breeding of a class of sheep that will best meet the requirements of consumers. Crosses between the Merino and the Lincoln, or between the Merino and the Leicester breeds have proved exceedingly valuable, as they furnish both a good quality of wool and an excellent carcass for export purposes. The breeding of Shropshire and Southdown sheep with a view to combining meat production with that of wool is also on the increase. Special attention is being paid to the raising of lambs, as it has become widely recognized that with suitable breeds the export trade in lambs is very profitable.

As in the case of frozen beef, the principal customer in this trade is the United Kingdom, which absorbed more than 95 per cent. of the total quantity exported from Australia during the last five years, while the balance was shipped mainly to Malaya (British), Egypt, Sweden, Hong Kong, and Ceylon.

MUTTON AND LAMB PRESERVED BY COLD PROCESS.—EXPORTS, AUSTRALIA, 1919–20 TO 1923–24.

Country to which Exported.	1919–20.	1920–21.	1921–22.	1922–23.	1923–24.	Total for 5 years.
QUANTITY.						
	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.
United Kingdom ..	239,154,276	47,792,058	88,631,613	162,653,301	35,906,594	574,227,842
Malaya (British) ..	1,102,658	1,228,087	1,089,985	1,106,778	846,641	5,374,149
Egypt ..	..	2,744,246	178,380	984,473	463,332	4,370,431
Sweden ..	2,119,602	1,217,551	..	..	..	3,337,153
Hong Kong ..	376,315	410,329	391,166	432,250	491,660	2,101,720
Ceylon ..	383,518	393,214	396,880	340,484	415,729	1,934,825
Union of South Africa ..	1,578,839	193,709	72,920	179,226	156,102	2,180,796
Philippine Islands ..	595,312	237,264	289,294	208,910	184,482	1,515,282
Canada ..	273,047	37,427	329,030	203,315	251,046	1,093,865
United States ..	148,304	124,535	..	..	..	272,839
Other Countries ..	1,239,475	510,401	335,731	1,503,824	999,763	4,589,194
Total ..	246,971,346	54,893,821	91,714,999	167,612,561	39,805,349	600,998,076

VALUE.

	£	£	£	£	£	£
United Kingdom ..	5,292,542	1,393,179	2,073,276	4,205,189	1,067,571	14,031,757
Malaya (British) ..	30,599	36,980	24,750	28,531	25,067	145,927
Egypt ..	..	64,409	3,514	18,825	11,021	97,769
Sweden ..	49,303	29,805	..	..	..	79,108
Hong Kong ..	10,201	12,352	2,690	12,104	14,969	58,316
Ceylon ..	10,401	11,784	7,781	8,872	12,296	51,134
Union of South Africa ..	34,788	4,535	1,029	3,710	4,167	48,229
Philippine Islands ..	14,709	6,595	6,347	5,740	5,486	38,877
Canada ..	8,675	955	7,422	3,944	6,216	27,212
United States ..	3,603	4,684	..	..	..	8,287
Other Countries ..	27,743	13,380	6,806	35,002	24,057	106,988
Total ..	5,482,564	1,578,858	2,139,615	4,321,917	1,170,850	14,693,604

§ 5. Wool.

1. **Importance of Wool Production.**—Wool is the chief factor in the pastoral wealth of Australia, the value of the output for the season ended 30th June, 1924, being about £59,078,000. The bulk of the production is exported, but with the greater activity of the local woollen mills there has, in recent years, been an increasing quantity used in Australia, although even now the quantity so used represents only about 8 per cent. of the whole clip.

2. **Greasy and Scoured Wool.**—For the purpose of comparing the clips as a whole for a series of years, it is convenient to have the total production expressed in terms of greasy wool.

The quantity of Australian wool scoured and washed before export during recent years has been on the average about 15 per cent. of the total quantity shipped. The loss of weight in scouring varies largely with season, locality, breed, and condition. It seems preferable to express "scoured and washed" wool in terms of "greasy" rather than vice versa, since the absolute error arising from uncertainty as to average loss of weight is thereby minimized.

In the tables dealing with production, "scoured and washed" wool has been converted into the estimated equivalent amount of "greasy" on the assumption that two pounds of "greasy" wool are on the average required to produce one pound of "scoured and washed."

3. **Production.**—(i) *Total.* The estimated production of wool in the several States, formerly based on the Customs returns, being no longer available from that source, an effort has been made to arrive at approximate figures from data collected by the State Statisticians from growers, fellmongers, etc. Particulars for years prior to 1919-20 will be found in earlier issues of the Year Book. The following table gives the estimates obtained for the five seasons ended 30th June, 1920 to 1924 :—

WOOL.—TOTAL PRODUCTION, 1919-20 TO 1923-24.

State.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
	lbs.	lbs.	lbs.	lbs.	lbs.
New South Wales (a)	296,641,000	240,231,000	285,418,000	293,571,000	271,008,000
Victoria ..	132,847,167	90,250,571	103,512,777	102,467,950	82,513,361
Queensland ..	118,035,461	114,809,963	132,579,733	134,971,150	121,913,075
South Australia ..	58,306,918	48,953,503	54,038,262	54,929,801	57,598,083
Western Australia ..	46,299,381	43,714,630	46,301,039	44,139,138	48,055,393
Tasmania ..	11,069,237	9,503,048	9,634,624	10,218,550	9,712,273
Northern Territory (b)	50,000	40,000	30,000	20,000	20,000
Total ..	663,249,164	547,502,715	631,514,435	640,317,589	590,820,185

(a) Including Federal Capital Territory.

(b) Approximate figures.

In connexion with the above figures compiled from growers' returns, a deficiency is apparent when comparisons are made with totals obtained from oversea shipments plus local consumption. Owing to the dislocation of shipping and the amount of carry-over wool held in Australia it was not possible to estimate the shortage during the war and post-war years, but the complete records published by the Central Wool Committee during its period of control show an average annual production of 721,000,000 lbs. for the three seasons ended 1920, compared with 631,000,000 lbs. as compiled from the replies of the growers, the deficiency in the latter compilation amounting to 12½ per cent.

A careful estimate, based on shipping and manufacturers' returns, reduced the extent of the shortage in 1923-24 to 7½ per cent., the estimated production so obtained amounting to 640,000,000 lbs. A special effort will be made by the Government Statistician in each State in 1924-25 to obtain full returns from the wool-growers.

(ii) *Weight and Value per Sheep Shorn.* The weight and value of wool per sheep shorn in the past five seasons are shown in the following table:—

WOOL.—WEIGHT AND VALUE PER SHEEP SHORN, 1919-20 TO 1923-24.

Season ended 30th June—		N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	All States.
WEIGHT.								
		lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.
1920	.. ..	7.03	6.38	6.59	7.89	5.71	5.32	6.73
1921	.. ..	6.93	5.77	7.03	7.56	5.76	5.19	6.65
1922	.. ..	7.49	6.23	7.57	7.70	6.19	5.77	7.18
1923	.. ..	7.24	6.25	6.99	7.58	5.82	5.86	6.91
1924	.. ..	7.14	6.08	6.66	8.37	6.42	5.53	6.86
VALUE.								
		s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
1920	.. ..	8 10	8 4	9 3	9 3	7 1	8 3	8 9
1921	.. ..	7 11	7 10	8 9	8 6	6 3	7 3	8 0
1922	.. ..	8 1	6 11	8 11	7 8	6 5	6 8	7 10
1923	.. ..	10 9	9 8	11 3	11 3	9 0	10 6	10 7
1924	.. ..	14 3	13 1	13 3	15 4	12 4	13 5	13 9

4. *Care Needed in Comparing Clips.*—In comparing successive clips, allowance must be made for the circumstance that, owing to climatic or other conditions, the time of shearing may be so far delayed that one clip may include almost thirteen months' growth of wool, while the succeeding one may include little more than eleven months' growth.

5. *World's Wool Production.*—The following table compiled by the Textile Division of the United States Department of Commerce shows the importance of Australia as a wool-producing country. Out of a total production of 2,797,327,000 lbs. in 1923, Australia's contribution amounted to 590,820,000 lbs., or more than 21 per cent. of the world's supply.

WOOL(a).—WORLD'S PRODUCTION, 1922 AND 1923.

Countries.	Average Annual Pre-War Production.(b)	Production.	
		1922.	1923.(c)
North America—	lbs.	lbs.	lbs.
United States	313,648,000	264,560,000	266,110,000
Canada	11,210,000	19,125,000	15,539,000
Mexico	7,000,000	792,000	780,000
Total	331,858,000	284,477,000	282,429,000
Central America and West Indies	1,000,000	750,000	750,000
South America—			
Argentine Republic ..	358,688,000	231,483,000	297,000,000
Brazil	35,000,000	23,800,000	23,800,000
Chile	17,430,000	38,500,000	38,500,000
Peru	9,940,000	10,000,000	10,000,000
Falkland Islands	4,324,000	3,200,000	3,200,000
Uruguay	156,968,000	92,000,000	96,000,000
All other	5,000,000	5,000,000	5,000,000
Total	587,350,000	403,983,000	473,500,000

(a) Computed on "greasy" basis. (b) Average for years 1909 to 1913 inclusive. (c) Where 1923 figures were not obtainable, an earlier figure or an unofficial estimate has been inserted.

WOOL(a).—WORLD'S PRODUCTION, 1922 AND 1923—*continued*.

Countries.	Average Annual Pre-War Production.(b)	Production.	
		1922.	1923.(c)
	lbs.	lbs.	lbs.
Europe—			
Austria	15,360,000	1,250,000	1,323,000
Belgium	1,060,000	825,000	825,000
Bulgaria	23,700,000	25,000,000	25,000,000
Czecho-Slovakia .. ..	..	4,303,000	4,303,000
Denmark	3,508,000	1,323,000	1,323,000
Estonia .. ..	..	13,224,000	3,150,000
Finland .. ..	..	7,500,000	7,500,000
France	80,688,000	38,220,000	41,777,000
Germany	25,600,000	51,809,000	53,500,000
Greece	14,000,000	13,420,000	13,000,000
Hungary	17,637,000	9,370,000	13,779,000
Iceland	1,980,000	1,980,000	1,980,000
Italy	55,000,000	50,000,000	55,000,000
Jugo-Slavia	25,446,000	24,251,000	35,000,000
Netherlands	3,556,000	4,400,000	5,100,000
Norway	8,160,000	4,409,000	5,200,000
Poland .. ..	..	6,725,000	5,839,000
Portugal	10,000,000	7,717,000	6,000,000
Rumania	13,228,000	48,000,000	52,910,000
Russia	320,000,000	150,000,000	150,000,000
Spain	52,000,000	88,000,000	90,364,000
Sweden	6,060,000	6,613,000	6,000,000
Switzerland	1,049,000	800,000	780,000
Turkey	28,000,000	..	..
United Kingdom	134,000,000	103,217,000	102,300,000
All other .. ..	..	5,000,000	5,000,000
Total	840,032,000	667,356,000	686,953,000
Asia—			
British India	60,000,000	60,000,000	65,000,000
China	50,000,000	61,320,000	78,000,000
Persia	12,146,000	12,146,000	18,000,000
Russia in Asia	60,000,000	45,000,000	45,000,000
Turkey in Asia	90,000,000	60,000,000	60,000,000
All other	1,000,000	1,000,000	1,000,000
Total	273,146,000	239,466,000	267,000,000
Africa—			
Algeria	35,221,000	35,155,000	35,155,000
British South Africa	157,761,000	187,000,000	180,000,000
Tunis	3,735,000	6,765,000	6,765,000
Morocco	14,850,000	19,175,000	19,976,000
All other	30,000,000	30,000,000	30,000,000
Total	241,567,000	278,095,000	271,896,000
Oceania—			
Australia	700,193,000	631,514,000	590,820,000
New Zealand	198,474,000	214,706,000	208,979,000
Total	898,667,000	846,220,000	799,799,000
Total all other Countries	13,000,000	15,000,000	15,000,000
GRAND TOTAL	3,186,620,000	2,735,347,000	2,797,327,000

(a) Computed on "greasy" basis. (b) Average for years 1909 to 1913 inclusive. (c) Where 1923 figures were not obtainable, an earlier figure or an unofficial estimate has been inserted.

6. Wool Locally Used.—The quantity of wool used in the woollen and tweed mills of the various States during the past five years was approximately as follows:—

**WOOL.—GREASY, USED IN LOCAL WOOLLEN AND TWEED MILLS,
1919-20 TO 1923-24.**

State.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
	lbs.	lbs.	lbs.	lbs.	lbs.
New South Wales	7,054,962	7,206,896	6,648,224	4,882,740	4,895,206
Victoria	11,360,400	12,799,593	13,233,011	15,926,225	13,068,646
Queensland	634,376	556,232	1,822,494	1,358,888	1,317,621
South Australia	693,297	683,779	608,098	621,265	586,800
Western Australia					
Tasmania	997,542	1,129,722	1,043,706	1,502,060	963,369
Total	20,680,577	22,376,222	23,415,533	24,291,178	20,831,644

The total consumption of wool in Australia cannot be given, as particulars in respect of wool-combing and knitting establishments are not collected in all the States. An estimate, based upon the available particulars and the purchases made by manufacturers at local wool sales, places the figure in the vicinity of 50,000,000 lbs.

7. Exports of Wool.—(i) *Greasy—Quantities.* Prior to the war, about 31 per cent. of the exports of wool from Australia was despatched to the United Kingdom, whereas the shipments for the same destination during the past five years have averaged nearly 54 per cent. The other leading consignees during the latter period were France, Belgium, United States of America, Japan, Italy and Germany, the principal continental countries taking 33 per cent., and America and Japan 12½ per cent. of the total shipments. The following table shows for the years 1919-20 to 1923-24 the quantities of "greasy" wool exported, and the principal countries of destination:—

WOOL IN THE GREASE.—EXPORTS, AUSTRALIA, 1919-20 TO 1923-24.

Country to which Exported.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.	Total for 5 years.
	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.
United Kingdom	397,688,435	283,583,260	337,775,993	259,230,707	163,169,820	1,441,448,215
France	32,243,017	32,484,058	138,751,611	137,742,458	121,268,001	460,489,145
Belgium	39,189,760	26,021,710	55,690,271	34,180,045	48,011,894	203,093,680
United States of America	28,326,008	34,291,220	45,778,371	50,234,655	31,909,668	190,539,922
Japan	8,928,971	9,856,174	50,775,592	50,043,561	45,455,153	165,059,451
Italy	44,597,155	15,975,186	39,629,626	28,646,259	25,143,698	153,991,924
Germany		8,715,299	39,330,067	32,940,661	31,422,309	112,908,336
Netherlands		884,634	636,378	3,017,462	14,091,947	18,630,421
Canada		362,915	1,619,372	1,184,321	697,794	3,864,402
India		381,516	613,701	296,164	1,598,944	2,890,325
Other Countries	1,360,782	5,344,064	1,619,731	807,697	1,196,811	10,329,085
Total	552,334,128	417,900,036	710,720,713	598,323,990	483,966,039	2,763,244,906

(ii) *Scoured and Washed—Quantities.* Similar particulars concerning the exports of "scoured and washed" wool are as follows:—

WOOL, SCOURED AND WASHED(a).—EXPORTS, AUSTRALIA, 1919-20 TO 1923-24.

Country to which Exported.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.	Total for 5 years.
	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.
United Kingdom	70,454,411	43,100,738	65,815,973	75,505,841	24,664,470	279,541,433
Belgium	13,931,527	10,648,048	16,153,469	3,938,725	3,749,960	48,421,729
France	105,177	1,544,101	13,271,181	13,533,782	8,461,502	36,905,803
Japan	3,676,467	3,719,499	5,051,529	6,435,286	5,010,121	23,892,902
United States of America	2,600,657	6,490,418	1,880,728	4,588,736	449,143	16,009,682
Germany		279,822	3,209,868	6,006,516	2,469,208	11,965,414
Italy		568,690	1,500,550	1,005,988	490,020	3,565,248
Canada	125,717	438,254	1,133,766	823,238	582,580	3,103,555
Netherlands		9,845		577,066	957,687	1,544,598
India		130,260	48,831	13,513	233,934	426,538
Other Countries	156,820	1,194,703	493,456	345,876	297,967	2,488,822
Total	91,050,776	68,124,378	108,559,351	112,774,567	47,356,652	427,865,724

(a) Including "tops."

The figures for "scoured and washed wool" include tops, amounting in 1919-20 to 6,148,118 lbs., valued at £2,957,679; in 1920-21, 6,598,681 lbs., valued at £2,049,588, in 1921-22, 6,200,505 lbs., valued at £1,207,048, in 1922-23, 6,374,922 lbs., valued at £1,412,683, and in 1923-24, 4,988,258 lbs., valued at £1,161,920. The total exports of wool tops during the last five years amounted to 30,310,484 lbs., valued at £8,788,918, of which 20,403,156 lbs., or more than 67 per cent., were shipped to Japan.

(iii) *Total Value of Exports.* The total value of the wool exported from Australia to the principal countries during the five years under review was:—

WOOL EXPORTS.—TOTAL VALUE, AUSTRALIA, 1919-20 TO 1923-24.

Country to which Exported.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.	Total for 5 years.
	£	£	£	£	£	£
United Kingdom ..	37,256,915	21,889,438	23,013,128	25,901,608	20,136,750	128,197,839
France ..	2,352,749	1,357,358	6,842,265	10,408,195	12,278,938	33,239,505
Japan ..	2,010,732	2,107,473	4,438,672	6,095,616	6,212,881	20,865,374
United States of America	2,516,142	3,838,987	4,347,360	5,618,652	4,323,239	20,642,380
Belgium ..	3,356,349	2,380,519	3,784,065	2,514,717	4,951,127	16,986,777
Italy ..	2,832,951	1,164,280	2,667,081	2,498,733	2,634,990	11,798,035
Germany ..	..	364,196	2,404,833	3,448,031	3,576,436	9,793,496
Netherlands ..	..	46,348	44,388	347,698	1,625,493	2,063,927
Canada ..	63,520	79,588	245,321	184,365	154,323	727,217
India ..	..	45,198	50,243	11,487	123,550	230,478
Other Countries ..	154,445	509,375	139,787	109,662	179,431	1,092,700
Total ..	50,543,803	33,780,760	47,977,243	57,138,764	56,197,158	245,637,728

8. *Average Export Value.*—The average values per lb. of Australian greasy wool according to the export returns for the past five years have been as follows:—

AUSTRALIAN GREASY WOOL.—EXPORT VALUE PER LB., 1919-20 TO 1923-24.

Year	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
	d.	d.	d.	d.	d.
Average value per lb. ..	16.69	14.53	13.16	18.38	24.14

9. *Exports and Local Sales of Wool, States, 1923-24.*—About 86 per cent. of the wool grown in Australia is normally sold in the local markets prior to export. Buyers from the United Kingdom, France, Belgium, Germany, and other European countries, also from America, Japan, China, and India, attend the sales conducted in Sydney, Melbourne, Geelong, Brisbane, Adelaide, Perth, Hobart, and Launceston.

The following table shows the number of bales of wool exported overseas from each State during the season ended 30th June, 1924, and the number sold for shipment, for use in local woollen mills, for scouring, etc. As considerable quantities of wool grown in some States are sold in or shipped from others, these figures do not therefore show actual local production, but total overseas shipments and sales.

WOOL.—EXPORTS AND LOCAL SALES, SEASON 1923-24.

State.	Overseas Exports.		Local Sales.(a)	
	Bales.	%	Bales.	%
New South Wales ..	709,059	41.49	695,575	40.96
Victoria ..	393,794	23.05	(b)417,772	24.60
Queensland ..	290,926	17.02	276,906	16.31
South Australia ..	158,472	9.27	177,606	10.46
Western Australia ..	131,244	7.68	102,763	6.05
Tasmania ..	25,443	1.49	27,519	1.62
Total ..	1,708,938	100.00	1,698,141	100.00

(a) Including wool sold to local woollen mills, scourers, etc. (b) Including wool sold at Albury.

10. Exports and Local Sales of Wool, Australia, 1895 to 1924.—The number of bales of wool exported from Australia, and the number sold at local sales prior to shipment, or taken for local use from 1895 onwards are shown in the following table :—

WOOL.—EXPORTS AND LOCAL SALES, AUSTRALIA, 1895 TO 1924.

Year ended 30th June.				Overseas Exports.	Local Sales.(a)	Ratio of Wool sold locally to Exports.
				Bales.	Bales.	%
1895	..	..	..	1,595,652	817,333	51.22
1900	..	..	..	1,221,163	807,031	66.09
1905	..	..	..	1,218,969	926,940	76.04
1910	..	..	..	1,921,705	1,624,561	84.54
1911	..	..	..	1,975,378	1,642,555	83.15
1912	..	..	..	2,020,547	1,700,494	84.16
1913	..	..	..	1,718,486	1,518,650	88.37
1914	..	..	..	1,966,576	1,703,744	86.64
1922	..	..	..	2,579,484	2,226,758	86.33
1923	..	..	..	2,315,255	1,932,315	83.46
1924	..	..	..	1,708,938	1,698,141	99.37

(a) Including wool absorbed by local woollen mills and wool-scouring establishments.

The steady development of the Australian wool market is clearly shown in this table. In the nineteen years ended 1914, the quantity sold locally more than doubled, and the ratio of wool sold locally to that exported increased from 51 per cent. in 1895 to over 86½ per cent. in the season ended 30th June, 1914. Particulars for the years 1915 to 1921 are not comparable owing to the abnormal conditions arising from the war, but the figures for the two selling seasons ended 30th June, 1923, indicate a return to normal, especially when allowance is made for the shipment of "Bawra" wool already appraised in previous seasons. The unusually high percentage of wool sold before shipment in 1924 was largely accounted for by the excellent selling conditions in Australia, but the ratio of sales to shipments was somewhat vitiated by the overlapping of the respective seasons, and the inclusion in the sales of wool for local consumption.

11. Quantities of Various Descriptions of Wool Sold in Each State.—The quantities and ratios of the various descriptions of wool marketed in each State are given in the following table :—

WOOL.—LOCAL SALES, DESCRIPTIONS, 1923-24.

Description of Wool.	N.S.W.	Victoria. (a)	Q'land.	S. Aust.	W. Aust.	Tasmania.	Total.
	Bales.	Bales.	Bales.	Bales.	Bales.	Bales.	Bales.
Greasy ..	644,502	410,254	245,620	174,895	101,213	27,503	1,603,987
Scoured ..	51,073	7,518	31,286	2,711	1,550	16	94,154
Total ..	695,575	417,772	276,906	177,606	102,763	27,519	1,698,141
Fleece, etc. ..	672,204	394,537	266,764	167,346	95,920	26,395	1,623,166
Lambs' ..	23,371	23,235	10,142	10,260	6,843	1,124	74,975
Total ..	695,575	417,772	276,906	177,606	102,763	27,519	1,698,141
Merino ..	583,587	230,020	274,717	170,653	97,898	6,481	1,363,356
Crossbred and all strong breeds ..	111,988	187,752	2,189	6,953	4,865	21,038	334,785
Total ..	695,575	417,772	276,906	177,606	102,763	27,519	1,698,141

(a) Including wool sold at Albury.

WOOL.—LOCAL SALES, DESCRIPTIONS, 1923-24—*continued*.

Description of Wool.	N.S.W.	Victoria. (a)	Q'land.	S. Aust.	W. Aust.	Tasmania.	All States.
	%	%	%	%	%	%	%
Greasy	92.66	98.20	88.70	98.47	98.49	99.94	94.46
Scoured	7.34	1.80	11.30	1.53	1.51	0.06	5.54
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Fleece, etc. ..	96.64	94.44	96.34	94.22	93.34	95.92	95.58
Lambs'	3.36	5.56	3.66	5.78	6.66	4.08	4.42
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Merino	83.90	55.06	99.21	96.09	95.27	23.55	80.29
Crossbred and all strong breeds ..	16.10	44.94	0.79	3.91	4.73	76.45	19.71
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00

(a) Including wool sold at Albury.

The great bulk of wool is marketed in the greasy state. Buyers still show a decided preference for wool in the grease, and the proportion of such wool sold during the 1923-24 season amounted to over 94 per cent. Of fleece and lambs' wool, the former represented 95.58, and the latter 4.42 per cent. The class of wool produced is largely merino, which is almost exclusively grown in the northern, western, and central parts of the continent, the bulk of the merino wool dealt with in Victoria coming from Riverina and other parts of New South Wales. The development of the frozen mutton and lamb export trade and the resultant raising of a type of sheep suitable for both mutton and wool led to a considerable increase in the production of crossbred wool throughout Australia during recent years. The percentage of such wool sold on the total sales amounted to 18.6 per cent. in 1912, whereas, eight years later, in 1919-20, it had increased to 33.9 per cent. The accumulation of large stocks of coarse wools after the war, and the consequent slump in prices induced many flock-masters to return to merino, and the percentage thereof sold in the local market increased from 66.11 in 1919-20 to 80.29 in 1923-24, while crossbred declined from 33.89 to 19.71 per cent. during the same period. The requirements of the frozen mutton and lamb trade, and the advance of closer settlement with its preference for crossbred sheep-raising in conjunction with wheat-growing or mixed farming, will compel the maintenance of the crossbred flocks; still, the extraordinary demand for fine wool at remunerative rates must influence the Australian flockmasters to concentrate in the future on the production of merino wool and its close counterparts comeback and fine crossbred.

12. Percentages of Various Descriptions of Wool Sold in each State.—The following table gives the percentage of each description of wool sold in the several States on the total sold in Australia during the season 1923-24 :—

WOOL.—LOCAL SALES, PERCENTAGES OF DESCRIPTIONS, 1923-24.

Description of Wool.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Total.
	%	%	%	%	%	%	%
Greasy	40.18	25.58	15.31	10.90	6.31	1.72	100.00
Scoured	54.24	7.98	33.23	2.88	1.65	0.02	100.00
Fleece, etc. ..	41.41	24.31	16.43	10.31	5.91	1.63	100.00
Lambs'	31.17	30.99	13.53	13.68	9.13	1.50	100.00
Merino	42.81	16.87	20.15	12.52	7.18	0.47	100.00
Crossbred and all strong breeds ..	33.45	56.08	0.65	2.08	1.45	6.29	100.00

The bulk of the crossbred wool of Australia is grown in Victoria and the southern parts of New South Wales; Tasmania, where crossbred sheep largely predominate, coming next in order, followed by small consignments from South Australia and Western Australia. In Victoria and New South Wales a noticeable feature of the past three seasons has been a general fining-up of the medium and coarse crossbreds by the use of merino and Corriedale rams. Australian pastures and climate are naturally more adapted for the growth of a larger proportion of fine crossbred wool than the River Plate, South Africa, and other wool-growing countries, and it is probable that this process of refinement will lead ultimately to the abandonment of coarse wool-growing in Australia.

13. The Wool Market. (i) *The 1923-24 Season.* The 1923-24 wool-selling season was remarkable for the excellent realizations, despite the many disturbing factors. The financial disorganization in Europe, the effects of the Japanese earthquake, and the paucity of the English and American demand depressed the opening sales; yet, not only was the high level of the previous season maintained from the outset, but prices rose steadily and consistently until records were established which were remarkably gratifying to producers. The explanation of the results achieved lies in the fact that the world's wool consumption has overtaken production. This actually happened some years ago, but the true position was disguised by the accumulation of surplus wool from the Wool Acquisition Scheme, which was available to supplement the current production. Other contributing factors were, of course, the shortage in the Australian production, the dearth of cotton, and the activity in textile-manufacturing centres.

The 1923-24 clip was light in supply, being grown under generally unfavourable conditions. The bulk of the staple was short and thinly grown with a dusty tip, but it was noteworthy for its fine quality and the absence of vegetable matter, which, with its dry condition, fitted it for the continental market.

During the year the wool sold in Australia totalled 1,698,141 bales, and though this quantity represented a decrease of 234,174 bales on the previous season's sales, there was an increase in the amount realized of no less than £7,066,573, the returns aggregating a value of £53,305,374 as compared with £46,238,801 in the previous year. The average price per bale was £31 7s. 10d., which, considering that it included every description of wool, is a remarkable figure, and constitutes a record for the Australian sales. Not only did prices for the finest wools reach their maxima, but average wools shared in the extraordinarily keen demand, and every description sold at higher rates than at any previous sale. Altogether the demand was keener and wider, and prices generally more satisfactory than at any previous time in the history of Australian wool-selling.

Although exceptionally high prices were realized for all descriptions of wool during the 1923-24 season, the actual top price for greasy merino was 3d. per lb. below the record of 1920-21, when 49½d. was reached. The season's record for merino fleece was 46½d., reached by the Plains brand sold in Geelong market, a centre which has now secured premier position at Australian wool sales for four successive seasons. With the exception of greasy and scoured merino fleece, new records were established in all descriptions, while the record for the latter class was equalled. The Geelong market excelled in highest prices, securing no less than ten records, whilst Brisbane obtained four, Sydney three, and Melbourne one. The highest prices for the past nine seasons for wools sold at auction, or fixed by appraisement at selling centres in Australia, are as follows:—

RECORD PRICES OBTAINED FOR WOOL IN AUSTRALIAN MARKETS, 1915-16 TO 1923-24.

Description.	Price.	Brand.	Bales.	Selling Centre.	Season.
Greasy merino :	d.				
Fleece ..	49½	Ware (conj.) ..	5	Geelong ..	1920-21
Broken ..	38½	Melville Forest ..	12	Geelong ..	1923-24
Pieces ..	37½	LLG/Mylora ..	10	Sydney ..	1923-24
		Spring Gully/JL/Wagga	8	Sydney ..	1923-24
		Blythvale ..	14	Geelong ..	1923-24
Bellies ..	35½	Rockview/JW ..	6	Melbourne ..	1923-24
		Wurrook ..	8	Geelong ..	1923-24
Locks ..	22½	T/Binda ..	1	Sydney ..	1923-24
		Wattle Grove/M ..	6	Geelong ..	1923-24
		V (reversed) over W/ Pen- lan Downs (in ½ circle)	5	Brisbane ..	1923-24
Lambs' ..	43½	Ware (conj.) ..	2	Geelong ..	1923-24
Greasy comeback :					
Fleece ..	42½	WTA/Boorook ..	10	Geelong ..	1923-24
		DR/Blackwood ..	13	Geelong ..	1923-24
		Mount Fyans ..	8	Geelong ..	1923-24
Lambs ..	37	Beggs/Bochara ..	4	Geelong ..	1923-24
Greasy crossbred :					
Fleece ..	39½	Mooleric ..	5	Geelong ..	1923-24
Lambs ..	30½	Mooleric ..	—	Geelong ..	1923-24
Scoured merino :					
Fleece ..	64	WG/Kedron ..	58	Brisbane ..	1920-21
		RM/Ardbrin ..	65	Brisbane ..	1923-24
Pieces ..	59½	RM/Ardbrin ..	29	Brisbane ..	1923-24
Lambs ..	54	C. Shaw / Fairlea / Julia Crk.	1	Brisbane ..	1923-24
Scoured crossbred :					
Fleece ..	52	Tomslake ..	9	Sydney ..	1923-24

Although 49½d. represents the highest price received for Australian greasy wool at recent Australian sales, the record price, according to "Dalgety's Annual Wool Review," for such wool in modern times was 109d. secured in London for the Geelong wool "NC" in February, 1920, while a line of scoured wool sold at London in March, 1920, realized 136d. per lb. In the early days John Macarthur sold wool at 126d. per lb., and in 1827 the "Sydney Gazette" contained an authentic record of Macarthur having secured 196d. per lb. for a single bale of the historic "J M'A" brand. Macarthur therefore not only played an important part in the founding of Australia's staple industry, but established a record that is still unbeaten.

(ii) *Wool Realization Scheme.* The British Australian Wool Realization Association Ltd. ("Bawra") was formed on the 27th January, 1921, for the purpose of selling in conjunction with the existing clip 50 per cent. of the Australian carry-over wool acquired by the Association on account of the Australian growers; also to dispose of, as agents, all carry-over wools owned by the British Government and consisting of New Zealand, Falkland Islands, South African and 50 per cent. of Australian wools as promptly and to the best advantage as market conditions would permit, while at the same time contributing to stabilize the wool market which had become demoralized on the return to free wool sales. Towards the end of the year 1921, 80,550 bales of South African wool owned by the British Government were handed over to the Association for disposal under the Agency Agreement.

The marketing of B.A.W.R.A. wools was successfully carried out at various centres in England, and on the Continent, and the concluding auction sale took place at Liverpool on 2nd May, 1924, when the last bale of wool carried over from the Imperial Wool Purchase Scheme was disposed of. The whole of the wool controlled by B.A.W.R.A. amounting

to 2,691,756 bales was sold in three and a half years, and passed into consumption together with the current clips of the wool-growing countries. The details of stocks and disposals are set out in the following table :—

STOCKS AND DISPOSALS OF B.A.W.R.A. WOOLS, 1st JANUARY, 1921—2nd MAY, 1924.

Description.	Stocks, 1st January, 1921.	Disposals.				
		1921.	1922.	1923.	To 2nd May, 1924.	Total Disposals, 1st January, 1921, to 2nd May, 1924.
	Bales.	Bales.	Bales.	Bales.	Bales.	Bales.
Australian :—						
Merino ..	904,180	484,031	345,710	73,694	89	903,524
Crossbred ..	931,825	176,199	274,632	319,146	162,297	932,274
New Zealand :—						
Merino ..	3,181	449	267	2,333	132	3,181
Crossbred ..	769,762	138,441	275,855	308,428	47,069	769,793
Falkland Islands	2,329	2,329	..	..	..	2,329
South African	(a)80,550	..	80,655	..	..	80,655
Grand Totals ..	2,691,827	801,449	977,119	703,601	209,587	2,691,756

(a) 1st January, 1922.

NOTE.—The differences in the totals of stocks and disposals is due to reclassification and reconditioning.

14. United Kingdom Importation of Wool.—The appended statement of the quantity and value of wool imported into the United Kingdom during the year 1923 from the principal wool-producing countries shows the important position which Australia occupies in the supply of wool to the mother country :—

WOOL.(a)—IMPORTS, UNITED KINGDOM, 1923.

Country from which imported.	Quantity.	Value.	Country from which Imported.	Quantity.	Value.
	lbs.	£		lbs.	£
Australia ..	308,031,400	21,308,760	Belgium ..	5,849,700	420,782
New Zealand ..	229,690,500	10,229,222	Peru ..	6,722,100	221,888
Union of South Africa ..	118,667,600	6,679,425	Uruguay ..	3,277,900	204,222
Argentina Re-public ..	52,595,500	2,199,947	Falkland Islands	3,835,400	178,800
India ..	93,564,900	1,961,498	Egypt ..	3,697,200	62,056
France ..	25,209,700	1,591,736	Other Countries	25,962,200	1,096,356
Chile ..	18,612,400	905,319			
United States of America ..	8,118,000	513,178	Total ..	903,834,500	47,573,189

(a) Greasy, Scoured, and Tops.

Of the importations of wool into the United Kingdom, Australian wool represented 34 per cent. of quantity and 45 per cent. of value, and New Zealand 25 per cent. of quantity and 22 per cent. of value. It is interesting to note that 765,986,900 lbs., valued at £40,974,713, were received from British Possessions, being 85 per cent. of the total weight imported and 86 per cent. of the total value.

§ 6. Trade in Hides and Sheepskins.

1. **Extent of Trade.**—In addition to the hides and sheepskins treated in the tanneries of the several States, a very considerable export trade is carried on, the value of cattle hides, calfskins, and sheepskins exported from Australia during the five years 1919-20 to 1923-24 amounting to £15,673,387, or an average of £3,134,677 per annum.

2. **Sheepskins with Wool.**—By far the largest item included in the amount mentioned in the preceding sub-section arises from the value of sheepskins with wool—the exports of which during the five years aggregated £10,529,196. The largest purchaser of sheepskins with wool is the United Kingdom, to which nearly 60 per cent. of the consignments were dispatched during the last five years. France ranked next in order of importance with 28½ per cent., while the remaining 12 per cent. was shipped principally to Belgium and the United States of America. The exports of sheepskins with wool during each of the years from 1919-20 to 1923-24 were as follows :—

SHEEPSKINS WITH WOOL.—EXPORTS, AUSTRALIA, 1919-20 TO 1923-24.

Particulars.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.	Total for 5 years.
Sheepskins (with wool) .. No.	6,046,122	4,478,853	7,270,660	9,610,335	7,063,988	34,469,958
Value .. £	1,967,354	1,155,643	1,346,582	2,948,489	3,111,128	10,529,196

3. **Sheepskins without Wool.**—In the case of sheepskins without wool the principal countries of consignment are the United States of America and the United Kingdom. These two countries were responsible for nearly 92 per cent. of the exports during the past five years, the purchases of the United States of America alone amounting to 68½ per cent. of the total shipments. Particulars concerning exports are as follows :—

SHEEPSKINS WITHOUT WOOL.—EXPORTS, AUSTRALIA, 1919-20 TO 1923-24.

Particulars.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.	Total for 5 years.
Sheepskins (without wool) .. No.	4,177,084	704,296	116,553	1,150,739	599,866	6,748,538
Value .. £	631,445	86,663	6,880	78,630	50,655	854,273

4. **Hides.**—(i) *Exports.* The export of Australian cattle hides, which fell away during the war years, is again assuming importance, and marked increases have taken place during the past three years. The trade is mainly with the United Kingdom and the United States of America, which countries took roughly one-half and one-fourth respectively of the total quantity exported during the past five years. Italy with 365,184, and Germany and Belgium with shipments amounting to 240,315 and 169,479 respectively were the next largest purchasers.

Particulars concerning the export of cattle hides during the past five years are as follows :—

CATTLE HIDES.—EXPORTS, AUSTRALIA, 1919-20 TO 1923-24.

Particulars.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.	Total for 5 years.
Cattle Hides .. No.	569,465	261,938	446,199	651,888	924,092	2,853,582
Value £	1,504,116	375,412	530,355	773,691	817,719	4,001,293

The calfskins exported during the years 1919-20 to 1923-24 numbered 613,838, valued at £288,625, shipped mainly to the United States of America, the value of the skins taken by that country averaging 83 per cent. of the total exports during the past five years. The annual export of horse hides is very small, and averaged only 1,351 hides, valued at £1,817.

(ii) *Imports.* The import trade in cattle hides and calfskins is expanding, the number annually imported on the average during the past five years amounting to 425,243. New Zealand supplies the great bulk of these importations, and shipments of limited quantities are also obtained from the Pacific Islands. The number and value of cattle hides, including calfskins, imported into Australia during the five years 1919-20 to 1923-24 are as follows :—

CATTLE HIDES.—IMPORTS, AUSTRALIA, 1919-20 TO 1923-24.

Particulars.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.	Total for 5 years.
Cattle Hides .. No.	205,662	313,442	451,373	675,471	480,265	2,126,213
Value £	579,915	500,460	433,014	541,079	533,539	2,588,007

The number of horse hides imported into Australia is unimportant. Imports during the last five years numbered 22,085, valued at £24,528.

CHAPTER XVII.

AGRICULTURAL PRODUCTION.

NOTE.—Except where otherwise stated, the “agricultural” years hereinafter mentioned are taken as ending on the 30th June.

§ 1. Introductory.

1. **Early Attempts at Agriculture.**—The instructions issued to Captain Phillip on the 25th April, 1787, directed him, amongst other things, to proceed as soon as possible to the cultivation of the soil “under such regulations as may appear to be necessary and best calculated for securing supplies of grain and provisions.” When the settlers landed at Botany Bay, however, it was found that the glowing accounts published in England by members of Captain Cook’s expedition of the fertility of the soil in that locality were considerably overdrawn. Even when Phillip and his company moved round to Port Jackson on the 26th January, 1788, matters were for a time in no better case. The ground in the immediate neighbourhood of the settlement was not suitable for the cultivation of cereal crops, and when the time came to cultivate the soil it was found that there were very few who possessed the slightest acquaintance with the art of husbandry.

2. **The First Sowing.**—In his despatch of the 15th May, 1788, Captain Phillip states that it was proposed to sow 8 acres with wheat and barley, although, owing to the depredations of field mice and ants, he was doubtful of the success of the crops.

3. **Discovery of Suitable Agricultural Land.**—A branch settlement was formed at Rosehill, on the Parramatta River, towards the close of 1788, and here grain crops were successfully raised. In his despatch of 12th February, 1790, Phillip refers to the harvest at Rosehill at the end of December, 1789, as consisting of 200 bushels of wheat and 60 of barley, in addition to small quantities of oats, Indian corn, and flax. By the year 1791 there were 213 acres under crop in this locality. In 1792 a new settlement was formed at Toongabbie, about 3 miles westward of Parramatta, where Phillip states “there are several thousand acres of exceeding good ground.” The Hawkesbury Valley, which probably contains some of the richest land in the world, was first settled in 1794. For a long time agricultural operations in Australia were restricted to the narrow belt of country between the tableland and the east coast of New South Wales, as it was not until the year 1813 that a passage was discovered across the Blue Mountains to the fertile plains of the west.

§ 2. Progress of Agriculture.

1. **Early Records.**—In an “Account of Live Stock and Ground under Crop in New South Wales, 19th August, 1797,” Governor Hunter gives the acreage under crop as follows:—Wheat, 3,361 acres; maize, 1,527 acres; barley, 26 acres; potatoes, 11 acres; and vines, 8 acres.

At a muster taken in 1808 the following was the return of crops:—Wheat, 6,874 acres; maize, 3,389 acres; barley, 544 acres; oats, 92 acres; peas and beans, 100 acres; potatoes, 301 acres; turnips, 13 acres; orchards, 546 acres; and flax and hemp, 37 acres.

By the year 1850 the area under crop had increased to 491,000 acres, of which 198,000 acres were cultivated in what is now the State of New South Wales, and 169,000 acres in Tasmania. At the end of 1850 the area under cultivation in Victoria, which was then the Port Phillip District of New South Wales, was 52,190 acres.

The gold discoveries of 1851 and subsequent years had at first a very disturbing effect on agricultural progress, the area under crop declining from 491,000 acres in 1850 to 458,000 acres in 1854; the area under cultivation in New South Wales decreased by nearly 66,000 acres, while in Tasmania a falling-off of over 41,000 acres was experienced. The demand for agricultural products occasioned by the large influx of population was, however, soon reflected in the increased area cultivated, for at the end of 1858 the land under crop in Australia totalled over a million acres. The largest increase took place in Victoria, which returned an area of 299,000 acres. For the same year South Australia had 264,000 acres in cultivation, Tasmania 229,000 acres, and New South Wales 223,000 acres.

2. Progress of Cultivation.—(i) *General.* The following table shows the area under crop in each of the States and Territories of Australia at decennial intervals since 1860, and during each of the last five seasons. The area under permanent artificially-sown grasses is excluded in all the States, except for the years 1860 to 1879 in the case of New South Wales, where the acreage cannot be separated. During those years, however, the area laid down under permanent grasses could not have been very large.

AREA UNDER CROP, 1860 TO 1923-24.

Season.	N. S. W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Nor. Ter.	Fed. Cap. Ter.	Australia.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1860-1	260,798	387,282	3,353	359,284	24,705	152,860	..	..	1,188,232
1870-1	426,976	692,840	52,210	801,571	54,527	157,410	..	..	2,185,534
1880-1	629,180	1,548,809	113,978	2,087,237	57,707	140,788	..	..	4,577,699
1890-1	852,704	2,031,955	224,993	2,093,515	69,678	157,376	..	..	5,430,221
1900-1	2,445,564	3,114,132	457,397	2,369,680	201,338	224,352	..	..	8,812,463
1910-11	3,386,017	3,952,070	667,113	2,746,334	855,024	286,920	360	..	11,893,838
1919-20	3,771,468	4,000,815	563,762	3,058,770	1,628,163	270,955	365	2,109	13,296,407
1920-21	4,465,143	4,489,503	779,497	3,231,083	1,804,987	297,383	296	1,966	15,069,858
1921-22	4,445,828	4,530,312	804,507	3,378,764	1,901,680	293,708	283	1,942	15,357,024
1922-23	4,694,287	4,862,548	863,755	3,575,452	2,274,938	298,611	427	2,172	16,572,250
1923-24	4,809,591	4,682,144	871,968	3,562,551	2,323,070	279,122	440	2,300	16,531,186

The progress of agriculture was uninterrupted from 1860 onwards, reaching its maximum in 1915-16, when 18,528,234 acres were cultivated. Following that year the decline in wheat-growing and the effects of the drought of 1918-19 reduced the acreage to 13,296,407 acres in 1919-20, a decrease of 5,231,827 acres in the space of four years. The obstacles to the disposal of the wheat crop having been removed, the area began to expand in 1920-21, and during the last four seasons the total acreage under cultivation increased by more than 3,000,000 acres. Wheat continues to be the most extensively-grown crop in Australia, the area thereunder for both grain and hay during 1923-24 amounting to nearly 67 per cent. of the total acreage under cultivation. The extension of the wheat area since 1919-20, despite intermittent adverse climatic and market conditions, is a happy augury for the continuance of agricultural development in Australia. The maximum area cultivated in 1915-16 was the result of a special war effort, and the results obtained far exceeded those for any previous year.

(ii) *Relation to Population.* The total area under cultivation per head of population reached its lowest point in recent years during 1919-20, but since that year the

total has increased at a much faster rate than the population. Details for the past five seasons are as follows :—

AREA UNDER CROP PER 1,000 OF POPULATION, 1919-20 TO 1923-24.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Ter.	Fed. Cap. Ter.	Austra- lia.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1919-20 ..	1,850	2,661	764	6,351	4,973	1,291	80	1,099	2,507
1920-21 ..	2,135	2,938	1,036	6,578	5,456	1,397	74	997	2,784
1921-22 ..	2,089	2,921	1,045	6,723	5,674	1,345	76	941	2,787
1922-23 ..	2,160	3,058	1,096	6,968	6,621	1,364	120	849	2,942
1923-24 ..	2,177	2,881	1,075	6,789	6,566	1,274	124	877	2,875

(iii) *Relation to Total Area.* The next table furnishes a comparison of the area under crop in the several States and Territories and Australia with the respective total areas. For Australia as a whole, the area under crop in 1923-24 represented only about 1 acre in every 115. In Victoria the proportion was about 1 acre in every 12, in New South Wales 1 in 41, in Tasmania 1 in 60, in South Australia 1 in 68, in Western Australia 1 in 269, in Queensland 1 in 492, in the Federal Territory 1 in 262, and in the Northern Territory about 1 in 761,629.

PERCENTAGE OF AREA UNDER CROP ON TOTAL AREA, 1919-20 TO 1923-24.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Ter.	Fed. Cap. Ter.	Austra- lia.
	%	%	%	%	%	%	%	%	%
1919-20 ..	1.904	7.113	0.131	1.257	0.261	1.615	..	0.351	0.698
1920-21 ..	2.255	7.982	0.182	1.328	0.289	1.772	..	0.327	0.792
1921-22 ..	2.245	8.054	0.187	1.389	0.304	1.751	..	0.323	0.807
1922-23 ..	2.370	8.645	0.201	1.470	0.364	1.780	..	0.361	0.871
1923-24 ..	2.429	8.324	0.203	1.465	0.372	1.664	..	0.382	0.868

In the Northern Territory the proportion which the area under crop bears to the total area is, at present, practically negligible.

3. *Artificially-sown Grasses.*—In all the States there are considerable areas under artificially-sown grasses mainly sown on uncultivated land after burning off the existing vegetation, and not included in "area under crops." Statistics regarding the areas under such grasses are as shown hereunder :—

AREA UNDER SOWN GRASSES, 1919-20 TO 1923-24.

Season.	New South Wales.	Victoria.	Queens- land.	South Australia.	Western Australia.	Tasmania.	Nor. Ter.	Fed. Cap. Ter.	Australia.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1919-20	1,542,446	1,062,244	449,019	18,107	16,672	667,390	500	871	3,757,249
1920-21	1,816,104	1,051,290	450,780	14,805	17,265	660,000	500	71	4,010,815
1921-22	2,005,444	1,032,104	459,914	20,890	18,441	781,000	550	71	4,318,414
1922-23	1,925,432	957,454	475,226	22,278	25,377	857,581	510	18	4,263,876
1923-24	1,930,894	1,024,591	498,552	30,800	38,022	799,443	500	18	4,322,820

The increase in the area of the grass lands of Australia during recent years, is due in large measure to the development of the dairying industry referred to in the next chapter.

§ 3. Relative Importance of Crops.

1. Distribution of Crops.—The following table gives the areas in the several States under each of the principal crops for the season 1923-24 :—

DISTRIBUTION OF CROPS, 1923-24.

Crop.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Ter.	Fed. Cap. Ter.	Australia.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
Wheat ..	2,945,040	2,454,117	51,149	2,418,415	1,656,915	14,503	..	295	9,540,434
Oats ..	86,402	520,654	216	176,299	241,608	51,460	..	291	1,076,930
Maize ..	166,933	29,104	120,092	94	43	..	..	41	316,307
Barley—									
Malting ..	2,039	39,588	589	166,824	4,744	3,829	..	..	217,613
Other ..	2,311	16,976	76	17,462	3,929	401	..	7	41,162
Beans and Peas ..	326	12,195	73	4,810	1,296	22,643	..	..	41,343
Rice ..	1,089	899	9	116	458	293	..	..	2,864
Other Cereals ..	..	..	..	..	66	..	..	..	66
Hay ..	1,022,118	1,277,606	46,909	631,267	329,534	97,183	10	1,599	3,406,226
Green Forage ..	429,765	107,371	306,693	55,282	51,754	10,389	50	7	961,311
Grass and other Seeds ..	..	3,448	610	405	..	629	..	..	5,092
Orchards and other Fruit Gardens ..	72,372	85,570	29,568	33,472	18,776	34,076	..	11	273,845
Vines—									
Productive ..	9,950	29,558	989	38,455	3,605	..	..	..	82,557
Unproductive..	4,609	13,041	280	10,848	1,630	..	..	..	30,408
Market Gardens..	8,526	16,212	1,719	1,448	2,259	478	..	17	30,659
Sugar Cane—									
Productive ..	6,733	..	138,742	..	..	..	..	..	145,475
Unproductive..	10,582	..	81,223	..	..	..	..	..	91,805
Potatoes ..	21,850	59,306	6,127	5,239	4,761	37,040	..	29	134,352
Onions ..	135	4,714	106	289	76	14	..	..	5,334
Other Root Crops ..	1,432	3,329	1,600	556	266	4,352	20	..	11,555
Tobacco ..	1,450	1,047	276	10	..	..	..	..	2,783
Broom Millet ..	3,746	2,626	457	..	..	..	..	..	6,829
Pumpkins and Melons ..	4,386	2,163	4,795	286	559	..	..	3	12,192
Hops ..	..	224	..	2	..	1,524	..	..	1,750
Cotton—									
Productive ..	544	5	40,821	9	37	..	100	..	41,516
Unproductive..	..	..	33,703	..	..	..	..	..	33,703
All other Crops ..	7,253	2,391	5,146	963	754	308	260	..	17,075
Total Area ..	4,809,591	4,682,144	871,968	3,562,551	2,323,070	279,122	440	2,300	16,531,186

2. Relative Areas of Crops in States and Territories.—Taking the principal crops, i.e., those in the case of which the cultivation in Australia amounts to more than 50,000 acres, the proportion of each in the various States and Territories to the total area under crop for the season 1923-24 is shown in the next table. In four of the States, viz., New South Wales, Victoria, South Australia, and Western Australia, wheat-growing for grain is by far the most extensive form of cultivation, while in the same States the hay crop is second in importance. In Victoria and Western Australia, the oat crop occupies third position, while green forage ranks third in New South Wales, and barley in South Australia. In Queensland, the principal crops in the order of importance are green forage, sugar-cane, maize, and wheat, while in Tasmania hay, oats, potatoes, and orchards and fruit gardens occupy the leading positions.

As pointed out previously, wheat is the main crop in Australia, the area thereunder for grain and hay representing in 1923-24 about 67 per cent. of the total area under cultivation.

RELATIVE AREAS UNDER CROP, 1923-24.

Crop.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Ter.	Fed. Cap. Ter.	Australia.
	%	%	%	%	%	%	%	%	%
Wheat ..	61.23	52.41	5.87	67.89	71.32	5.20	..	12.83	57.71
Hay ..	21.25	27.29	5.38	17.72	14.19	34.82	2.27	69.52	20.60
Oats ..	1.80	11.12	0.02	4.95	10.40	18.44	..	12.65	6.51
Green Forage ..	8.94	2.29	35.17	1.55	2.23	3.72	11.36	0.31	5.82
Maize ..	3.47	0.62	13.77	0.00	0.00	..	..	1.78	1.91
Barley ..	0.09	1.21	0.08	5.17	0.37	1.51	..	0.30	1.57
Orchards and Fruit Gardens	1.51	1.83	3.39	0.94	0.81	12.21	..	0.48	1.66
Sugar-cane	0.36	..	25.23	..	..	..	..	..	1.44
Potatoes ..	0.45	1.27	0.70	0.15	0.20	13.27	..	1.26	0.81
Vineyards	0.30	0.91	0.15	1.38	0.23	..	..	..	0.68
All other ..	0.60	1.05	10.24	0.25	0.25	10.83	86.37	0.87	1.29
Total ..	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

3. Area of Chief Crops, Australia, 1919-20 to 1923-24.—The acreage under each of the principal crops in Australia during the last five seasons is shown below :—

AREA OF CHIEF CROPS.—AUSTRALIA, 1919-20 TO 1923-24.

Crop.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
	Acres.	Acres.	Acres.	Acres.	Acres.
Wheat ..	6,419,160	9,072,167	9,719,042	9,763,861	9,540,434
Hay ..	3,125,582	3,233,189	2,994,519	3,338,456	3,406,226
Oats ..	1,068,296	936,996	733,406	1,014,376	1,076,930
Green Forage ..	1,401,280	406,954	452,508	893,871	961,311
Maize ..	265,469	284,283	305,186	313,202	316,307
Orchards and Fruit Gardens ..	271,894	278,551	281,149	275,687	273,845
Barley ..	267,309	334,747	298,910	342,196	258,775
Sugar-cane ..	159,037	174,001	197,293	216,886	237,280
Potatoes ..	113,900	140,195	149,144	135,735	134,352
Vineyards ..	73,326	81,165	92,414	105,476	112,965
All other Crops	131,154	127,610	133,453	172,504	212,761
Total ..	13,296,407	15,069,858	15,357,024	16,572,250	16,531,186

During the period under review, the areas of the several crops, while reflecting seasonal and economic influences, have increased considerably, the most notable advance taking place in wheat. Of the other crops, sugar-cane, vineyards and maize have made the most consistent progress since 1919-20.

§ 4. Wheat.

1. Progress of Wheat-Growing.—(i) *Area and Production.* Wheat is the principal crop raised in Australia, and the development of wheat-growing during the past 30 years constitutes one of the most interesting features of Australian agriculture. Since 1895, when the area under wheat amounted to $3\frac{1}{2}$ million acres, an average of 240,000 acres has been added annually, until in 1924–25 no less than $10\frac{1}{2}$ million acres were cut for grain. The area and yield of wheat for grain are given below for each State for the five years ended 1923–24, and are shown from the year 1860 onwards in the graphs hereinafter. An estimate is also appended for the 1924–25 crop :—

WHEAT.—AREA AND PRODUCTION, 1919–20 TO 1924–25.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Fed. Cap. Ter.	Australia.
AREA.								
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1919–20 ..	1,474,935	1,918,269	46,478	1,926,915	1,041,827	11,497	139	6,419,160
1920–21 ..	3,128,775	2,295,865	177,320	2,167,646	1,275,675	28,284	602	9,072,167
1921–22 ..	3,194,408	2,611,198	164,670	2,384,012	1,336,228	27,985	541	9,719,042
1922–23 ..	2,942,339	2,644,314	145,492	2,453,086	1,552,868	25,244	518	9,763,861
1923–24 ..	2,945,040	2,454,117	51,149	2,418,415	1,656,915	14,503	295	9,540,434
1924–25(a) ..	3,543,860	2,705,323	177,779	2,499,852	1,867,614	13,320	..	10,807,748
YIELD.								
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bush.	Bushels.
1919–20 ..	4,387,209	14,858,380	311,638	14,980,413	11,222,950	213,589	813	45,974,992
1920–21 ..	55,610,993	39,468,625	2,707,357	34,258,914	12,248,080	565,874	14,007	145,873,850
1921–22 ..	42,759,389	43,867,596	3,025,786	24,946,525	13,904,721	577,178	7,611	129,068,806
1922–23 ..	28,660,824	35,697,220	1,877,836	28,784,767	13,857,432	569,587	7,176	109,454,842
1923–24 ..	33,171,300	37,795,704	243,713	34,551,955	18,920,271	305,628	4,700	124,993,271
1924–25(a) ..	59,785,000	47,364,495	2,712,214	30,528,625	23,887,367	267,000	..	164,544,748

(a) Preliminary figures.

The area devoted to the production of wheat for grain reached its maximum in 1915–16, when 12,484,512 acres were sown, largely as the result of a special war effort. After that year, however, there was a serious decline, brought about largely by war conditions and unfavourable seasons, and the area in 1919–20 fell to 6,419,160 acres, or only half that of 1915–16. The promise of remunerative Government guarantees, coupled with the prospects of high prices, was responsible for a marked advance in 1920–21, and the area was further extended during the next three years, the total gain for Australia since 1919–20 amounting to more than 3 million acres.

Although final figures for 1924–25 for all the States are not yet available, the data to hand indicate the total area under wheat for grain in Australia at about 10,807,748 acres, an increase of $1\frac{1}{2}$ million acres on the previous year's figure. The season was a bounteous one, and an estimated total of 164,544,701 bushels was harvested, giving the excellent average of 15.22 bushels to the acre.

The harvest of 179,065,703 bushels reaped in 1915–16 represents the maximum production of wheat in Australia. Yields exceeding 100,000,000 bushels have been recorded on nine occasions, all of which have occurred since 1913–14. The annual production of wheat during the seasons 1914–15 to 1923–24 averaged 110,213,671 bushels, and the amount by which this average may be exceeded depends to a great extent on seasonal conditions. During each of the last five seasons the yield has exceeded 100 million bushels, the average for the period being 134,791,094 bushels. This is the first occasion on which a succession of such bountiful harvests has occurred, the satisfactory returns being due to the good seasons and the extension of the practice of bare-fallowing.

(ii) *Average Yields.* In the next table will be found the average yield of wheat per acre in each of the last five seasons, and for the decennium 1914-24 :—

WHEAT.—YIELD PER ACRE, 1919-20 TO 1923-24.

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Fed. Cap. Ter.	Australia.
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
1919-20 ..	2.98	7.75	6.71	7.77	10.77	18.58	5.85	7.16
1920-21 ..	17.79	17.19	20.91	15.80	9.60	20.01	23.27	16.08
1921-22 ..	13.39	16.80	18.37	10.46	10.41	20.62	14.07	13.28
1922-23 ..	9.74	13.50	12.91	11.73	8.92	22.56	13.85	11.21
1923-24 ..	11.26	15.40	4.76	14.29	11.42	21.07	15.93	13.10
Average 10 seasons, 1914-24	11.16	13.14	12.48	11.40	8.99	18.20	14.58	11.49

As the above figures show, there were considerable variations in the average yields, chiefly due to the vagaries of the seasons. For a series of years the yield in Australia generally averages about 11 bushels to the acre, the average yield for the period 1860 to 1923-24 amounting to 10½ bushels. The excellence of the 1920-21 season is reflected in the exceptional average of 16.08 bushels obtained in that year, an average which has been exceeded once only by the 16.35 bushels reaped as far back as 1866, when less than 1,000,000 acres were sown in relatively fertile areas.

(iii) *Relation to Population.* During the seasons embraced in the following table, the Australian production of wheat per head of population has varied between 8½ bushels in 1919-20 and 27 bushels in 1920-21. The State in which wheat-growing generally occupies the most important position relatively to population is South Australia, which in 1923-24 had a yield averaging 66 bushels per head. Queensland and Tasmania are the States in which the average production of wheat per head is least, the quantity raised being generally below that required for local consumption. Particulars for the past five seasons are as follows :—

WHEAT.—YIELD PER 1,000 OF POPULATION, 1919-20 TO 1923-24.

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Fed. Cap. Ter.	Australia.
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
1919-20 ..	2,153	9,884	423	31,105	34,278	1,017	424	8,667
1920-21 ..	26,594	25,828	4,928	69,749	37,024	2,659	7,103	26,952
1921-22 ..	20,101	28,284	3,930	49,635	41,485	2,643	3,688	23,427
1922-23 ..	13,190	22,448	2,382	56,089	40,329	2,602	2,806	19,430
1923-24 ..	15,013	23,253	300	65,845	53,475	1,395	1,793	21,739

The normal annual consumption of wheat in Australia, exclusive of the requirements for seed, poultry and other live stock, is 302 lbs. (5.04 bushels) per head of population.

2. *Australian and Foreign Wheat Yields.*—(i) *Average Yield.* The next table gives the average return per acre in the principal wheat-growing countries of the world, ranging from Denmark with a maximum of 46 bushels per acre to Tunis, with a minimum of 5½ bushels per acre. Australia, with approximately 12½, occupies a relatively subordinate position.

WHEAT.—YIELD PER ACRE, VARIOUS COUNTRIES, 1919-1923.

Country.	Average Yield in Bushels per acre.		Country.	Average Yield in Bushels per acre.	
	Average, 1919-1921.	1923.		Average, 1919-1921.	1923.
Denmark ..	46.37	43.06	Rumania ..	13.35	15.19
Netherlands ..	39.76	39.78	Spain ..	13.31	14.98
Belgium ..	35.66	38.72	United States ..	13.10	13.48
Switzerland ..	31.10	34.38	Jugo-Slavia ..	(a)13.06	15.89
United Kingdom ..	31.06	32.88	Australia ..	12.73	13.10
New Zealand ..	30.88	23.23	Canada ..	12.66	20.92
Sweden ..	30.12	30.57	Argentine Republic	12.02	14.35
Germany ..	26.57	29.14	India ..	11.42	11.97
Egypt ..	24.89	26.45	Korea ..	11.23	9.26
Japan ..	21.82	23.65	Uruguay ..	10.79	12.76
Czecho-Slovakia ..	20.33	23.98	Greece ..	10.27	12.48
France ..	19.92	20.16	French Morocco ..	9.49	8.92
Chile ..	17.75	18.91	Union of South		
Hungary ..	(a)16.33	20.56	Africa ..	8.64	(b)6.62
Lithuania ..	15.40	14.70	Algeria ..	8.21	11.50
Austria ..	15.34	18.71	Portugal ..	8.07	11.54
Poland ..	15.34	19.78	Soviet Republics ..	7.02	9.72
Italy ..	14.97	19.46	Mexico ..	(c)6.24	7.22
Bulgaria ..	13.54	15.73	Tunis ..	5.41	6.36

(a) Average for two years. (b) Year 1921. (c) Single Year.

(ii) *Total Production.* The latest available official statistics of the production of wheat in various countries are given in the following table:—

WHEAT.—YIELD IN VARIOUS COUNTRIES, 1919-1923.

Country.	Yield in Bushels (000 omitted).		Country.	Yield in Bushels (000 omitted).	
	Average, 1919-1921.	1923.		Average, 1919-1921.	1923.
United States ..	864,426	785,754	Chile ..	22,180	27,521
India ..	302,835	369,152	Algeria ..	21,447	36,395
Canada ..	255,773	474,207	French Morocco ..	19,193	20,050
Soviet Republics ..	(c)255,124	330,335	Mexico ..	(a)14,594	8,217
France ..	249,165	275,572	Belgium ..	11,778	13,376
Argentine Republic	188,034	247,038	Greece ..	10,722	13,356
Italy ..	167,982	224,838	Sweden ..	10,670	11,082
Spain ..	137,673	157,112	Korea ..	9,703	8,101
Australia ..	106,979	124,993	Portugal ..	9,324	12,964
Germany ..	89,798	106,449	Denmark ..	8,153	8,825
Rumania ..	68,968	100,909	Uruguay ..	7,887	12,493
United Kingdom ..	66,649	59,370	Tunis ..	7,610	9,921
Jugo-Slavia ..	(a)47,411	61,069	New Zealand ..	7,330	4,250
Hungary ..	(a)45,322	67,706	Union of South		
Egypt ..	32,953	40,654	Africa ..	7,144	(b)6,027
Bulgaria ..	29,672	36,224	Netherlands ..	6,629	6,112
Japan ..	28,838	28,480	Austria ..	5,726	8,889
Czecho-Slovakia ..	26,805	30,126	Switzerland ..	3,732	3,594
Poland ..	25,302	49,735	Lithuania ..	2,562	2,965

(a) Average for two years. (b) Year 1921. (c) Exclusive of Turkestan, Transcaucasia and the Far East.

NOTE.—The harvests reported above for 1923 relate to the year 1923 for the Northern, and 1923-24 for the Southern Hemisphere.

The complete compilation of the world's production of wheat is not possible owing to the failure of certain countries to report their harvests. The Institute of Agriculture, Rome, has, however, compiled figures obtained from all the producing countries reporting, with the following results :—

WHEAT.—WORLD'S PRODUCTION (a), 1909-13 TO 1923.

Years.	Area.	Yield.	Yield per acre.
	Acres.	Bushels.	Bushels.
Average, 1909-1913 ..	264,110,000	3,706,491,000	14.03
1920	256,448,000	3,214,129,000	12.53
1921	254,686,000	3,312,930,000	13.01
1922	241,990,000	3,403,157,000	14.06
1923	254,082,000	3,804,973,000	14.98
Average, 1920-1923 ..	251,802,000	3,433,797,000	13.64

(a) From countries reporting.

It is stated in the Report of the Institute that if all countries for which progress data are lacking were taken into account, the world's total production of wheat may be approximately estimated at 4,500 million bushels.

The world's wheat yield in 1923 was extremely favourable. The increase of 401,816,000 bushels on the previous year's figures was due principally to the larger area sown and the higher yields obtained per acre. Weather conditions were generally propitious throughout the wheat-growing countries, and the yields were therefore superior to the average of the three previous years and to that of the pre-war period. The Australian contributions to the world's production during the past three years amounted to 3 per cent.

3. Prices of Wheat.—(i) *British Wheat.* Since the United Kingdom is the largest importer of Australian wheat, the price of wheat in the British markets is a matter of prime importance to the local producer. The table below gives the average prices per Imperial quarter realized for British-grown wheat :—

BRITISH WHEAT.—PRICES PER QUARTER, 1861 TO 1924.

Year.	Average for Year.	Highest Weekly Average.	Lowest Weekly Average.	Year.	Average for Year.	Highest Weekly Average.	Lowest Weekly Average.
	s. d.	s. d.	s. d.		s. d.	s. d.	s. d.
1861 ..	55 4	61 6	50 0	1918 ..	72 10	74 5	71 2
1871 ..	56 8	60 0	52 6	1919 ..	72 11	73 4	72 5
1881 ..	45 4	55 2	40 9	1920 ..	80 10	90 11	72 6
1891 ..	37 0	41 8	32 3	1921 ..	71 6	89 10	44 0
1901 ..	26 9	27 8	25 8	1922 ..	47 10	56 3	37 5
1911 ..	31 8	33 4	30 0	1923 ..	42 2	49 3	37 6
1917 ..	75 9	83 10	70 3	1924 ..	49 3	56 1	41 5

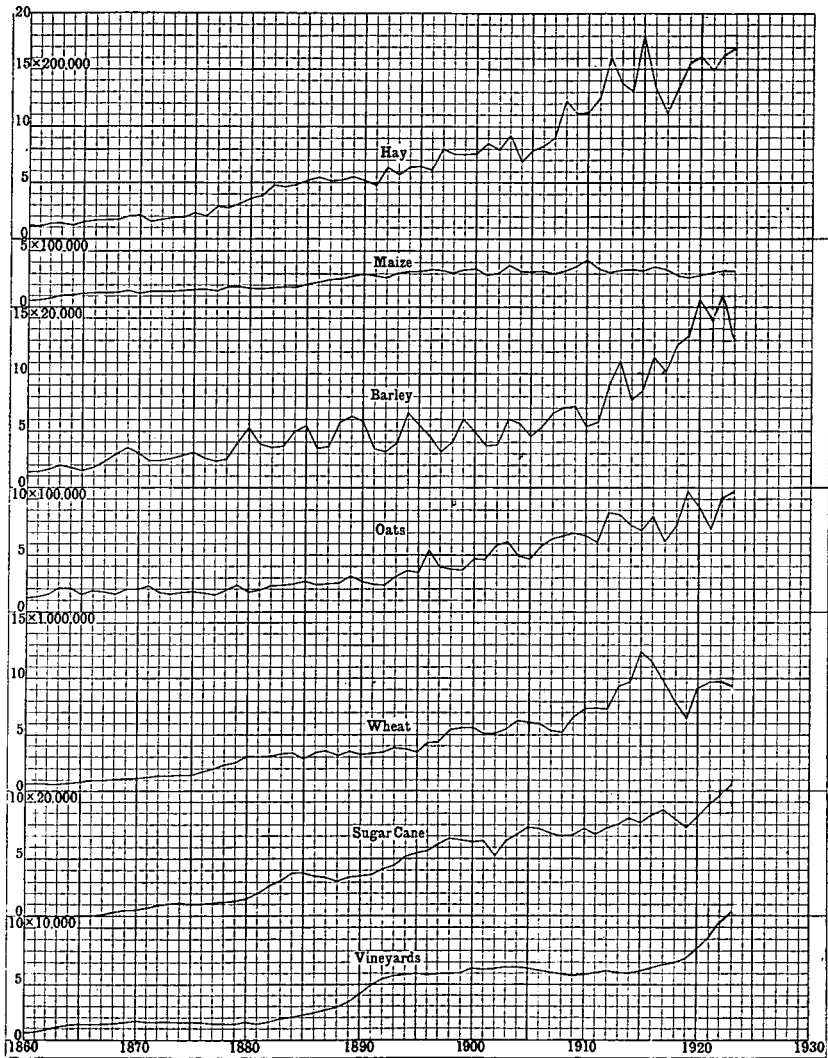
(ii) *Australian Export Values.* In the next table will be found a statement of the export values of Australian wheat during each of the last six years :—

AUSTRALIAN WHEAT.—EXPORT VALUES, 1919-20 TO 1924-25.

Heading.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.	1924-25.
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
Price per bushel ..	5 6	9 0	5 9	5 5	4 8	6 8

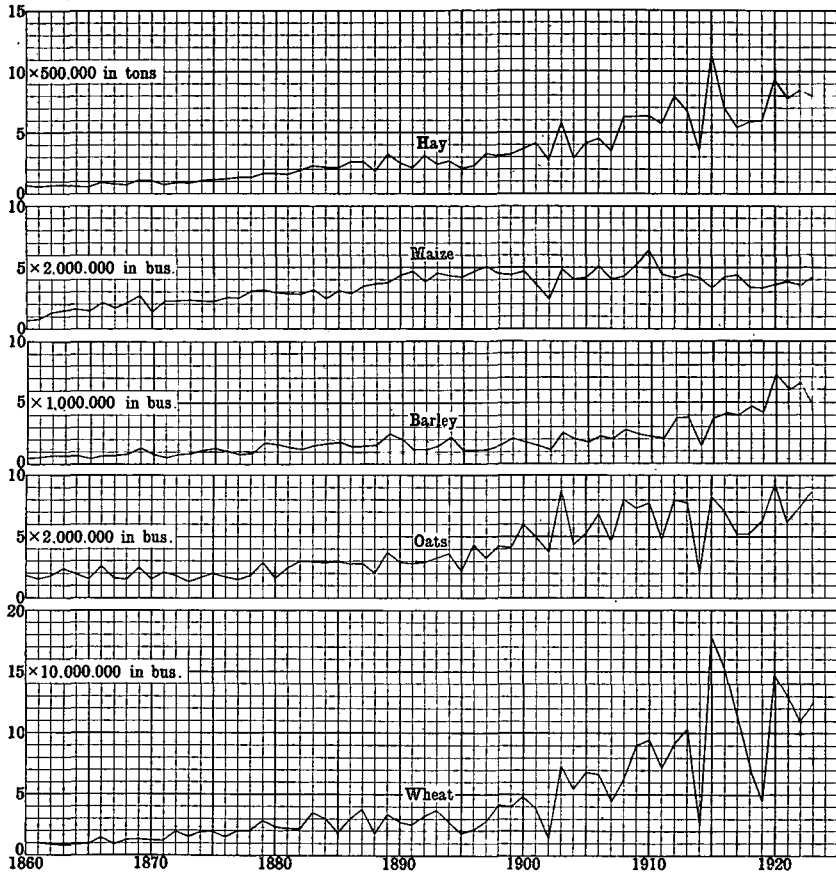
The export values here-shown are the values for the successive years in the principal markets of Australia.

AREA UNDER PRINCIPAL CROPS—AUSTRALIA, 1860 TO 1923-24.



EXPLANATION.—The base of each small square represents an interval of one year, while the vertical height represents a number of acres, varying with the nature of the crop in accordance with the scale given on the left of the graph. The height of each curve above its base line denotes, for the crop to which it relates, the total area under cultivation in Australia during the successive seasons.

PRODUCTION OF PRINCIPAL CROPS—AUSTRALIA, 1860 TO 1923-24.



EXPLANATION.—A separate base line is provided for each of the crops dealt with. In each instance the base of a small square represents an interval of one year, the vertical height of such square representing in the case of wheat, 10,000,000 bushels; oats, 2,000,000 bushels; barley, 1,000,000 bushels; maize, 2,000,000 bushels; and hay, 500,000 tons. The height of each curve above its base line denotes the aggregate yield in Australia of the particular crop during the successive seasons.

4. Imports and Exports of Wheat and Flour.—(i) *Quantities.* The table hereunder shows the imports, exports, and net exports of wheat and flour from 1919–20 to 1923–24. For the sake of convenience, flour has been expressed at its equivalent in wheat, 1 ton of flour being taken as equal to 48 bushels of grain. In ordinary seasons the Australian imports of wheat and flour are negligible. During the past five years the exports ranged between 50,446,320 bushels in 1922–23 and 117,214,455 bushels in 1921–22, the net exports for the period averaging 89,444,220 bushels.

WHEAT AND FLOUR.—IMPORTS AND EXPORTS, AUSTRALIA, 1919–20 TO 1923–24.

Year.	Imports.			Exports.			Net Exports.
	Wheat.	Flour.	Total.	Wheat.	Flour.	Total.	
	Bushels.	Eq. Bushels. ^a	Bushels.	Bushels.	Eq. Bushels. ^a	Bushels.	Bushels.
1919–20	285	4,128	4,413	82,470,658	24,854,112	107,324,770	107,320,357
1920–21	1,170	3,696	4,866	76,791,883	11,026,800	87,818,683	87,813,817
1921–22	247	1,728	1,975	99,947,223	17,267,232	117,214,455	117,212,480
1922–23	15,288	2,112	17,400	31,510,272	18,936,048	50,446,320	50,428,920
1923–24	203	1,920	2,123	59,910,480	24,537,168	84,447,648	84,445,525

(a) Equivalent in bushels of wheat.

(ii) *Destination of Exported Breadstuffs.* In the next two tables will be found a list of the principal countries to which Australia exported wheat and flour during each year of the period 1919–20 to 1923–24. The countries are as shown in the Australian Customs returns, but wheat ships are frequently instructed to call for orders at various ports, and the countries to which these ports belong cannot, therefore, always be considered as the ultimate destination of the whole of the wheat said to be exported to them.

WHEAT.—EXPORTS, AUSTRALIA, 1919–20 TO 1923–24.

Country to which Exported.	1919–20.	1920–21.	1921–22.	1922–23.	1923–24.	Total for Five Years.
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
United Kingdom	50,074,725	38,709,680	40,914,035	10,762,600	23,017,707	163,478,747
Italy ..	1,397,738	2,219,143	18,447,762	11,647,165	6,483,732	40,195,540
Japan ..	6,381,738	7,332	7,497,943	3,711,211	13,067,907	30,666,131
France ..	13,010,455	8,921,645	3,341,835	1,284,924	3,562,313	30,121,172
Egypt ..	2,265,283	10,477,463	3,286,433	38,783	1,339,707	17,407,669
India ..	1,522,593	25,623	15,035,429	..	..	16,583,645
Union of South Africa ..	1,220,147	1,157,778	1,331,417	2,545,162	3,721,697	9,976,201
Belgium ..	..	5,754,723	1,312,480	178,930	622,283	7,868,416
Germany ..	..	2,504,690	2,996,292	397	110,770	5,612,149
Canary Islands(a)	624,425	3,532,793	236,807	..	..	4,394,025
New Zealand ..	2,393,667	602,843	73,539	..	1,247,362	4,317,411
Netherlands ..	..	2,202,653	1,192,977	..	142,753	3,538,383
Norway ..	1,645,125	342,510	960,855	117,012	106,415	3,171,917
Sweden ..	523,065	..	..	412,547	1,304,445	2,240,057
Peru ..	131,023	..	697,205	167,110	..	995,338
Ceylon ..	52,645	303	257,098	993	950	311,989
United States ..	73,293	112	..	..	..	73,405
Other Countries	1,154,736	332,592	2,365,116	643,500	5,182,439	9,678,383
Total ..	82,470,658	76,791,883	99,947,223	31,510,334	59,910,480	350,630,578

(a) For orders.

The exports of flour during the same period and the principal countries of destination were as follows :—

FLOUR.—EXPORTS, AUSTRALIA, 1919-20 TO 1923-24.

Country to which Exported.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.	Total for Five Years.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Egypt	92,537	61,502	108,550	127,072	182,938	572,599
United Kingdom	72,828	81,952	103,634	83,804	92,425	434,643
Netherlands East Indies	42,070	15,388	41,826	50,899	49,262	199,445
Union of South Africa	39,513	41,458	24,947	39,250	37,685	182,853
Malaya (British)	63,508	8,264	20,471	32,619	33,683	158,545
Philippine Islands	39,942	3,040	10,749	10,292	13,012	77,035
Hong Kong	36,506	368	10,003	6,318	11,739	64,934
Japan	24,876	480	6,555	1,664	15,430	49,005
France	33,407	..	..	..	..	33,407
Ceylon	8,191	755	6,282	7,681	10,142	33,051
Mauritius	4,532	3,320	5,639	8,757	8,569	30,817
China	1,199	77	4,391	260	12,905	18,832
New Caledonia	3,999	3,202	3,532	3,517	3,765	18,015
Portuguese East Africa	632	2,477	3,542	3,475	2,963	13,089
Fiji	2,257	1,362	2,484	2,602	3,024	11,729
Papua	879	636	322	378	780	2,995
India	486	4	657	1,063	130	2,340
Italy .. ..	..	..	..	112	2,025	2,137
New Zealand	256	137	95	84	294	866
Other Countries	50,176	5,303	6,055	14,654	30,420	106,608
Total	517,794	229,725	359,734	394,501	511,191	2,012,945

For the five years under review the export of wheat to the United Kingdom amounted to 163,478,747 bushels, or 46½ per cent. of the total export for the period, while the export of flour to the same destination aggregated 572,599 tons, or 28 per cent. of the total export. The country to which the largest consignments of flour were made during the last quinquennium was Egypt, followed by the United Kingdom, Netherlands East Indies, South Africa, and Malaya (British).

(iii) *Exports of Wheat and Flour.* From the foregoing returns it will be seen that the quantity of wheat exported in the form of flour during the past five years represents, on the average, about 22 per cent. of the total equivalent in wheat exported as wheat or flour from Australia.

A point of some interest in connexion with the export of wheat, and one which bears also on the proportion of wheat and flour exports just referred to, is that concerning the quantity of phosphoric acid which this export has the effect of removing from Australia, and the necessity which exists for the return to the soil of this substance in some form.

According to an estimate furnished by the chemist to the New South Wales Department of Agriculture (F. B. Guthrie, Esq., F.C.S., &c.), the proportions of milled product from a bushel (60 lbs.) of wheat are, approximately, 42 lbs. of flour, 9 lbs. of bran, and 9 lbs. of pollard, while the percentage of phosphoric acid contained in these products is as follows :—

Flour	0.32 per cent., or 0.13 lb. per bushel.
Bran	3.00 „ 0.27 „
Pollard	0.90 „ 0.08 „

The total amount of phosphoric acid contained in a bushel of wheat, is, therefore 0.48 lb., of which 0.13 lb. is in the flour and 0.35 lb. in the offal.

During the last ten years the net exports from Australia of wheat and its milled products have amounted to 499,011,559 bushels of wheat, 3,360,665 tons of flour, and 2,273,625 bushels of bran, pollard, and sharps. On the basis of the figures quoted above this export would contain no less than 254,884,199 lbs. of phosphoric acid, the value of which as a fertilizer would amount to more than one million pounds sterling.

5. Local Consumption of Wheat.—The estimated consumption of wheat for food and for seed purposes in Australia during the past ten years is given in the following tables:—

WHEAT.—HUMAN CONSUMPTION, AUSTRALIA, 1915 TO 1923-24.

Year.	Flour Milled.	Net Exports of Flour.		Net Quantity Available for Home Consumption.		Net Quantity Available per Head of Population.	
		Flour.	Flour in Biscuits Exported.	Flour.	Equivalent in Terms of Wheat.	Flour.	Equivalent in Terms of Wheat.
	Tons.	Tons.	Tons.	Tons.	Bushels.	Tons.	Bushels.
1915 ..	541,810	7,633	2,160	532,017	25,536,820	.1069	5.133
1915-16 ..	577,038	146,618	2,650	427,770	20,532,960	.0861	4.131
1916-17 ..	869,975	290,572	2,885	576,518	27,672,860	.1171	5.623
1917-18 ..	985,761	374,062	9,810	601,889	28,890,670	.1205	5.784
1918-19 ..	1,046,268	483,340	6,437	556,491	26,711,570	.1098	5.270
1919-20 ..	1,050,228	517,708	4,590	527,930	25,340,640	.1000	4.801
1920-21 ..	801,511	229,648	3,375	568,488	27,287,420	.1052	5.050
1921-22 ..	911,452	359,698	2,284	549,470	26,374,560	.0999	4.798
1922-23 ..	985,479	394,457	1,831	589,191	28,281,170	.1049	5.034
1923-24 ..	1,092,856	511,151	1,727	579,978	27,838,940	.1011	4.853
Aggregate 10 years	8,862,378	3,314,887	37,749	5,509,742	264,467,616	.1050	5.041

WHEAT USED FOR SEED.—AUSTRALIA, 1914 TO 1923.

Year.	Area for Grain and Hay.	Wheat for Seed Purposes.		
		Quantity.	Per Acre.	Per Head of Population.
	Acres.	Bushels.	Bushels.	Bushels.
1914 ..	11,012,679	10,059,000	.913	2.023
1915 ..	14,414,024	13,041,000	.905	2.624
1916 ..	12,894,917	11,523,000	.894	2.343
1917 ..	10,910,669	9,713,000	.890	1.949
1918 ..	9,428,398	9,054,000	.960	1.782
1919 ..	8,250,572	7,774,000	.942	1.466
1920 ..	10,271,055	9,471,000	.922	1.750
1921 ..	10,878,401	10,077,000	.926	1.847
1922 ..	11,253,078	10,456,000	.929	1.878
1923 ..	11,016,608	10,328,000	.937	1.816
Aggregate for 10 years ..	110,330,401	101,496,000	.920	1.948

In addition to the above, the quantity of grain fed to poultry and other live stock as well as that used as seed for green forage crops must be taken into consideration. These quantities vary from year to year according to the price of wheat and the nature of the season, and sufficient data are not available on which to base an annual estimate but, taken over a period, the amount so consumed has been estimated to range from one half to one bushel per head of population per annum. The flour available for human consumption necessarily fluctuates from year to year coincident with stocks. In some years the flour available per head of population, after deducting net exports from quantity milled, shows a substantial increase over the average for the previous year, this, however, being counterbalanced by a decline in the following year. The average quantity of

flour consumed per annum for the ten years under consideration was 0.1050 tons per head of population, which, expressed in equivalent terms in wheat, represents 5.041 bushels. The estimates of quantity of grain used for seed purposes are based on data supplied by the Agricultural Departments of the several States giving average quantities of seed used per acre for wheat sown either for grain or hay. The average annual quantity thus used during the ten years was 1.948 bushels per head of population, and 0.920 bushels or 55 lbs. per acre sown. For all purposes the consumption of wheat in Australia during the past three years averaged 42,647,000 bushels, or 7.57 bushels per head of the population.

6. **Value of the Wheat Crop.**—The estimated value of the wheat crop in each State and in Australia during the season 1923-24 is shown below :—

WHEAT.—VALUE OF CROP, (a) 1923-24.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Fed. Cap. Ter.	Australia.
	£	£	£	£	£	£	£	£
Aggregate value..	8,569,250	8,661,515	72,098	8,062,008	4,493,564	76,410	1,210	29,936,055
Value per acre ..	£2/18/2	£3/10/7	£1/8/2	£3/6/8	£2/14/3	£5/5/4	£4/7/1	£3/2/9

(a) Exclusive of the value of straw.

7. **Voluntary Wheat Pools.**—Reference to the operations of the Voluntary Wheat Pools in the various States during 1924-25 will be found in the Appendix at the end of this volume.

§ 5. Oats.

1. **Progress of Cultivation.**—(i) *Area and Yield.* Oats came next in importance to wheat amongst the grain crops cultivated last season, but while wheat grown for grain accounted for 57.71 per cent., oats represented only 6.51 per cent. of the area under crop in Australia. The progress in cultivation of oats for the last five years is shown in the table hereunder, and more fully in the graphs herein :—

OATS.—AREA AND YIELD, 1919-20 TO 1923-24.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Fed. Cap. Ter.	Australia.
AREA.								
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1919-20	75,893	559,547	363	192,153	191,931	48,185	224	1,068,296
1920-21	77,537	443,636	4,690	167,001	193,486	50,474	172	936,996
1921-22	69,619	318,681	2,274	125,148	162,866	54,642	176	733,406
1922-23	73,635	492,356	1,216	173,716	242,269	58,813	371	1,043,776
1923-24	86,402	520,654	216	176,299	241,608	51,460	291	1,076,930
YIELD.								
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
1919-20	583,503	6,603,067	2,871	1,634,239	2,486,918	1,242,258	3,255	12,556,111
1920-21	1,640,552	10,907,191	103,933	2,331,067	2,022,031	1,514,155	2,148	18,521,077
1921-22	1,168,406	6,082,258	34,409	1,297,646	2,019,603	1,543,617	1,494	12,147,433
1922-23	1,243,198	8,093,459	19,499	1,681,783	2,261,863	1,674,751	7,602	14,982,155
1923-24	1,564,970	9,366,205	2,427	2,157,938	2,846,670	1,359,785	5,330	17,303,325

The oat crop exhibited little variation during the past decennium, ranging on the average around 13,000,000 bushels. The demand for the grain for making oatmeal is limited to about 2,000,000 bushels annually. It is mainly used as feed grain, and its value, particularly in good seasons, is not sufficient to warrant the increase in cultivation which may be expected when oats is marketed through live stock and more remunerative prices thereby realized than those now offering on the local market.

The principal oat-growing State is Victoria, which produces more than half the total quantity of oats grown in all States. For Australia as a whole the record yield of oats was obtained in 1920-21, when 18,521,077 bushels were harvested.

(ii) *Average Yield.* The average yield per acre of oats varies considerably in the different States, being highest in Tasmania and lowest in South Australia. Particulars as to average yield in each of the last five seasons, and for the decennium 1914-24 are given in the succeeding table :—

OATS.—AVERAGE YIELD PER ACRE, 1919-20 TO 1923-24.

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Fed. Cap. Ter.	Australia.
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
1919-20 ..	7.71	11.80	7.91	8.50	12.96	25.78	14.53	11.75
1920-21 ..	21.16	24.59	22.16	13.96	10.45	30.00	12.49	19.77
1921-22 ..	16.78	19.09	15.13	10.37	12.40	28.25	8.49	16.56
1922-23 ..	16.88	16.44	16.04	9.68	10.56	28.48	20.49	14.77
1923-24 ..	18.11	17.99	11.24	12.24	11.78	26.42	18.32	16.07
Average for 10 seasons 1914-24	16.46	17.07	16.88	10.68	11.34	25.36	16.91	15.34

The smallest average yield per acre ever recorded for Australia was that experienced in the abnormally dry season 1914-15, viz., 5.60 bushels, while the largest in the past ten years was that of the season 1915-16, amounting to 22.92 bushels per acre.

(iii) *Relation to Population.* The State in which oat production occupies the most important position in relation to population is Tasmania, the yield for that State representing about 6½ bushels per head during the last five years, as compared with 2½ bushels per head for Australia as a whole. Particulars for the seasons 1919-20 to 1923-24 are furnished in the succeeding table :—

OATS.—YIELD PER 1,000 OF POPULATION, 1919-20 TO 1923-24.

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Fed. Cap. Ter.	Australia.
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
1919-20 ..	286	4,393	4	3,393	7,595	5,917	1,696	2,367
1920-21 ..	785	7,138	138	4,746	6,112	7,114	1,089	3,422
1921-22 ..	549	3,922	45	2,582	6,026	7,067	724	2,205
1922-23 ..	572	5,090	25	3,277	6,583	7,650	2,973	2,660
1923-24 ..	708	5,762	3	4,112	8,046	6,207	2,033	3,009

2. *Comparison with Other Countries.*—(i) *Total Production.* A comparison of the Australian production of oats with that of the leading oat-producing countries of the world is furnished in the following table :—

OATS.—PRODUCTION IN VARIOUS COUNTRIES, 1919-1923.

Country.	Yield in Bushels (000 omitted).		Country.	Yield in Bushels (000 omitted).	
	Average, 1919-1921.	1923.		Average, 1919-1921.	1923.
United States ..	967,952	1,039,862	Hungary ..	(b)17,709	21,967
Canada ..	382,873	479,394	Netherlands ..	17,311	16,655
Soviet Republics ..	(a)335,005	405,922	Jugo-Slavia ..	(b)16,460	17,181
Germany ..	261,565	336,589	Australia ..	14,409	17,303
France ..	187,518	269,558	Austria ..	12,957	20,689
United Kingdom ..	(a)133,581	130,492	Lithuania ..	12,718	18,221
Poland ..	94,835	194,139	Norway ..	11,506	6,400
Sweden ..	58,421	59,337	Latvia ..	(b) 9,853	13,130
Czecho-Slovakia ..	47,958	73,348	Japan ..	8,830	8,774
Rumania ..	42,008	56,236	Algeria ..	7,449	15,399
Denmark ..	40,143	50,484	Estonia ..	6,551	6,353
Irish Free State ..	(a)32,671	28,123	New Zealand ..	6,157	4,095
Argentine Republic	29,961	65,165	Union of South		
Spain ..	28,348	32,348	Africa ..	5,760	(c)6,482
Italy ..	25,785	31,862	Bulgaria ..	5,187	7,351
Belgium ..	25,720	37,646	Portugal ..	4,368	6,478
Finland ..	20,493	17,031			

(a) Average 1920-1922.

(b) Average for two years.

(c) Year 1921.

(ii) *Yield per Acre.* The average yield per acre of oats is very low in Australia compared with other countries where its cultivation is more extensive. Arranging the countries contained in the foregoing table according to the magnitude of average yield for the years specified, the results are as follows:—

OATS.—YIELD PER ACRE, VARIOUS COUNTRIES, 1919-1923.

Country.	Average Yield in Bushels per acre.		Country.	Average Yield in Bushels per acre.	
	Average, 1919-1921.	1923.		Average, 1919-1921.	1923.
Netherlands ..	44.48	43.76	Austria ..	20.48	25.81
Belgium ..	44.09	57.55	Finland ..	20.06	16.08
Irish Free State ..	(a)37.88	35.78	Rumania ..	19.69	16.92
Denmark ..	37.65	45.01	Estonia ..	18.91	16.82
New Zealand ..	37.09	29.04	Lithuania ..	18.06	22.33
United Kingdom ..	(a)37.00	39.12	Spain ..	17.87	20.28
Germany ..	34.10	40.73	Latvia ..	(b)17.07	17.40
Norway ..	33.62	24.99	Bulgaria ..	16.21	19.86
Sweden ..	33.23	33.07	Jugo-Slavia ..	(b)16.20	18.52
Japan ..	(b)32.54	32.96	Australia ..	15.78	16.07
Czecho-Slovakia ..	27.13	35.25	Soviet Republics ..	(a)14.36	16.11
Poland ..	25.18	31.24	Argentine Republic	13.89	23.72
Canada ..	24.00	33.32	Algeria ..	13.47	25.68
France ..	23.44	31.87	Union of South		
United States ..	23.05	25.47	Africa ..	9.66	(c)12.22
Italy ..	22.18	26.05	Portugal ..	9.18	12.32
Hungary ..	(b)20.99	27.39			

(a) Average 1920-1922.

(b) Average for two years.

(c) Year 1921.

3. *Price of Oats.*—The average wholesale prices of oats in the markets of the several capitals for the year 1923 are given in the following table:—

OATS.—AVERAGE WHOLESALE PRICES, 1923.

Particulars.	Sydney.(a)	Melbourne.	Brisbane.	Adelaide.	Perth.	Hobart.
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
Average price per bushel ..	4 5½	3 8½	..	3 0½	3 3½	3 10

(a) Year ended 30th June, 1924.

4. Imports and Exports.—The production of oats in Australia has not yet reached sufficient proportions to admit of a regular export trade; in fact in certain years the imports have exceeded the exports, notably in 1903, 1906, 1908, 1910, in each of the four years prior to 1916-17, and in 1922-23. The quantities and values of oats imported into, and exported from Australia during the years 1919-20 to 1923-24 are given hereunder :—

OATS.—IMPORTS AND EXPORTS, AUSTRALIA, 1919-20 TO 1923-24.

Year.	Imports.		Exports.		Net Exports.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	Bushels.	£	Bushels.	£	Bushels.	£
1919-20 ..	146,700	41,759	290,323	83,175	143,623	41,416
1920-21 ..	139,728	30,057	865,588	143,874	725,860	113,817
1921-22 ..	14,880	2,569	325,792	49,980	310,912	47,411
1922-23 ..	557,523	90,255	35,895	7,506	—521,628	—82,749
1923-24 ..	108,260	18,624	190,453	41,647	82,193	23,023

NOTE.—(—) signifies net import.

The principal country from which imports of oats have been obtained is New Zealand, while the principal countries to which oats were exported during the period under review were New Zealand, Java, and the United Kingdom.

5. Oatmeal, etc.—Oatmeal, etc., is imported into Australia principally from the United Kingdom, the United States of America, and New Zealand. The total importations of oatmeal, wheatmeal, and rolled oats during 1923-24 amounted to 75,104 lbs., and represented a value of £1,572, while the exports amounted to 957,235 lbs., valued at £7,622, and were shipped mainly to Papua, Japan, New Zealand, and Pacific Islands.

6. Value of Oat Crop.—The estimated value of the oat crop of the several States of Australia for the season 1923-24 is as follows :—

OATS.—VALUE OF CROP, (a) 1923-24.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Fed. Cap. Ter.	Australia.
	£	£	£	£	£	£	£	£
Aggregate value..	326,040	1,561,034	394	323,691	471,480	249,290	1,110	2,933,039
Value per acre ..	£3/15/6	£3/0/0	£1/16/6	£1/16/9	£1/19/1	£4/16/11	£3/16/3	£2/14/6

(a) Exclusive of the value of straw.

§ 6. Maize.

1. States Growing Maize.—The only States in which maize is extensively grown for grain are those of New South Wales and Queensland, the area so cropped in these two States during the season 1923-24 being 287,025 acres, or nearly 91 per cent. of the total for Australia. Of the balance, Victoria contributed 29,104 acres, South Australia 94 acres, Western Australia 43 acres, and the Federal Capital Territory 41 acres. The climate of Tasmania prevents the growing of maize for grain. In all the States, maize is grown to a greater or less extent as green forage, particularly in connexion with the dairying industry.

2. *Progress of Maize-growing.*—(i) *Area and Yield.* Notwithstanding its valuable properties and its pre-eminence as the world's most extensively grown cereal, the cultivation of maize has decreased in Australia by about 25,000 acres during the past decennium. While increases in area were recorded in both Queensland and Victoria, the decline of nearly 50,000 acres in New South Wales was responsible for the reductions in the total for Australia. The maximum area sown to maize was 414,914 acres, as far back as 1910-11, which figure was considerably in excess of the average planted during the last ten years, which amounted to 312,681 acres. The area and yield of maize for grain in each State are given in the following table for the last five years. The fluctuations from year to year are shown more fully on the graph herein.

MAIZE.—AREA AND YIELD, 1919-20 TO 1923-24.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Nor. Ter.	Fed. Cap. Ter.	Australia.
AREA.								
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1919-20	136,509	23,474	105,260	165	11	50	..	265,469
1920-21	144,105	24,149	115,805	199	19	6	..	284,283
1921-22	146,687	23,227	135,034	186	43	9	..	305,186
1922-23	138,169	25,846	149,048	116	23	..	..	313,202
1923-24	166,933	29,104	120,092	94	43	..	41	316,307
YIELD.								
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
1919-20	4,052,025	878,922	1,830,664	1,810	84	500	..	6,764,005
1920-21	4,176,000	1,065,880	2,012,864	3,738	240	60	..	7,258,782
1921-22	3,976,300	951,960	2,907,754	3,792	540	92	..	7,840,438
1922-23	3,287,500	879,915	3,217,848	2,716	335	..	..	7,388,314
1923-24	4,621,950	1,464,731	2,024,902	1,266	834	..	1,050	8,114,733

The maximum production of maize in Australia was recorded in 1910-11, when the harvest exceeded 13,000,000 bushels. This figure has not been approached in recent years, the average for the past decade amounting to 7,500,000 bushels.

The expansion of maize-growing is hindered by unstable local markets, and the development of dairying with its consequent increase in permanent pastures. It is, however, believed that the cereal will eventually become an important crop in Australia. Its suitability in crop rotation, coupled with the advance of closer settlement and irrigation, will doubtless lead to an extension in its cultivation. Moreover, the value of the grain for fattening stock is becoming more generally recognized, and the establishment of new industries which utilize it will foster an increased demand.

(ii) *Average Yield.* The following table gives particulars of the average yield per acre of the maize crops of the States for the seasons 1919-20 to 1923-24, and also for the decennium 1914-24 :—

MAIZE.—AVERAGE YIELD PER ACRE, 1919-20 TO 1923-24.

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	N. Ter.	Fed. Cap. Ter.	Aus-tralia.
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
1919-20 ..	29.68	37.44	17.39	10.97	7.64	10.00	..	25.48
1920-21 ..	28.98	44.14	17.38	18.78	12.63	10.00	..	25.53
1921-22 ..	27.11	40.99	21.53	20.39	12.56	10.22	..	25.69
1922-23 ..	23.79	34.04	21.59	23.41	14.57	..	..	23.59
1923-24 ..	27.69	50.33	16.86	13.47	19.40	..	25.61	25.65
Average for 10 seasons 1914-24	25.58	43.98	20.48	16.86	13.06	10.81	22.10	24.59

With the exception of Canada, the average yield of maize per acre in Victoria is the largest in the world. This is due, in large measure, to the fact that the area under maize in that State is comparatively small and is situated in districts peculiarly suited to its growth. The average yield in New South Wales exceeds that obtained in Queensland.

(iii) *Relation to Population.* During the past five seasons the Australian production of maize has averaged $1\frac{1}{2}$ bushels per head of population, while the average for Queensland, the State in which the production per head is highest, amounted to over 3 bushels. Details for the several States during the past five seasons are as follows:—

MAIZE.—YIELD PER 1,000 OF POPULATION, 1919-20 TO 1923-24.

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	N. Ter.	Fed. Cap. Ter.	Australia.
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
1919-20 ..	1,988	585	2,482	4	..	110	..	1,275
1920-21 ..	1,997	697	2,676	8	1	15	..	1,341
1921-22 ..	1,869	614	3,776	8	2	25	..	1,423
1922-23 ..	1,513	553	4,082	5	1	..	..	1,312
1923-24 ..	2,092	901	2,496	2	2	..	400	1,411

3. *Australian and Foreign Maize Production.*—(i) *Total Yield.* The United States of America is the most important maize-producing country of the world. On the average 100,000,000 acres are annually planted in that country, and 3,000,000,000 bushels reaped, representing nearly 70 per cent. of the world's production. Of the huge quantities raised, about 85 per cent. is fed to live stock on farms, 10 per cent. is used for human food, and only a very small fraction, viz., $1\frac{1}{2}$ per cent., enters into international trade. The yields of the various countries are as follow:—

MAIZE.—PRODUCTION IN VARIOUS COUNTRIES, 1919-1923.

Country.	Yield in Bushels (000 omitted).		Country.	Yield in Bushels (000 omitted).	
	Average, 1919-1921.	1923.		Average, 1919-1921.	1923.
United States ..	2,874,304	3,054,369	France ..	11,924	12,673
Argentine Republic ..	221,761	270,066	Portugal ..	10,949	10,219
Brazil ..	187,953	121,313	Belgian Congo ..	10,704	(a)7,283
Rumania ..	111,440	160,467	Salvador ..	(b)7,836	9,842
India ..	91,307	(a)76,080	Greece ..	7,820	(g)7,874
Italy ..	89,157	89,204	Australia ..	7,283	8,115
Jugo-Slavia ..	(d)88,020	84,782	Czecho-Slovakia ..	6,509	10,621
Mexico ..	(c)82,519	(a)68,261	Indo-China ..	(e)6,286	(f)5,733
Egypt ..	65,399	67,550	Japan ..	6,208	(a)6,164
Soviet Republics ..	(d)56,878	85,602	Uruguay ..	5,773	6,519
Dutch East Indies ..	55,375	46,636	Guatemala ..	4,448	7,874
Union of South Africa ..	41,496	(a)50,390	French Morocco ..	4,307	4,805
Hungary ..	(d)38,120	49,247	Madagascar ..	3,867	(g)4,240
Spain ..	26,048	23,925	Rhodesia ..	3,576	(a)5,179
Bulgaria ..	20,900	26,866	Poland ..	(d)3,042	3,831
Canada ..	15,396	13,608	Korea ..	(d)2,858	2,806
Philippine Islands ..	15,172	16,663	Austria ..	2,255	3,450

(a) Year 1922. (b) Average for two years. (c) Single year. (d) Average 1920-1922. (e) Average 1914-1918. (f) Year 1920. (g) Year 1921.

(ii) *Yield per Acre.* The average yield per acre of maize in Australia during 1923 was 25.7 bushels, which may be regarded as satisfactory when compared with those of other maize-producing countries, the yields per acre for which are shown in the following table:—

MAIZE.—YIELD PER ACRE IN VARIOUS COUNTRIES, 1919-1923.

Country.	Average Yield per acre in Bushels.		Country.	Average Yield per acre in Bushels.	
	Average, 1919-1921.	1923.		Average, 1919-1921.	1923.
Canada	54.14	42.83	Spain	17.27	20.52
Soviet Republics ..	(a)37.13	20.52	Greece	16.58	(d)15.93
Egypt	33.74	36.22	Portugal	15.23	13.60
United States ..	29.41	29.32	Salvador	14.70	(f)17.12
Madagascar ..	29.12	(d)18.87	Bulgaria	14.67	19.73
Argentine Republic	28.17	31.91	France	14.38	15.00
Brazil	(e)26.76	14.34	Poland	(b)13.99	20.32
Australia	25.57	25.65	Mexico	(c)13.54	(e)15.93
Czecho-Slovakia ..	24.84	23.86	Korea	(a)13.29	12.05
Italy	24.02	23.54	India (British) ..	13.01	(d)15.19
Japan	22.92	(d)24.79	Dutch East Indies	12.43	11.58
Austria	21.24	16.34	Philippine Islands	12.15	12.09
Rhodesia	19.81	(e)23.54	Union of South Africa ..	(b)10.38	(f)12.50
Hungary	(a)19.38	20.51	Uruguay	9.94	11.32
Jugo-Slavia	(a)18.78	19.04	Guatemala	8.68	17.22
Rumania	18.55	19.07	French Morocco ..	8.21	7.20
Indo-China	(g)18.29	(f)14.34			

(n) Average 1920-1922. (b) Average for two years. (c) Single year. (d) Year 1921. (e) Year 1922. (f) Year 1920. (g) Average 1914-1918.

4. Price of Maize.—The average wholesale price of maize in the Sydney market for each of the last five years is given in the following table :—

MAIZE.—AVERAGE PRICE, SYDNEY, 1919-20 TO 1923-24.

Particulars.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
Average price per bushel ..	<i>s. d.</i> 8 11	<i>s. d.</i> 6 6	<i>s. d.</i> 5 2	<i>s. d.</i> 6 1	<i>s. d.</i> 5 1

5. Oversea Imports and Exports.—The decline in the production of maize in Australia during recent years has necessitated an average annual import of about 1,000,000 bushels during the past ten years, the bulk of the supplies being furnished by South Africa. Details of imports and exports for the years 1919-20 to 1923-24 are as follow :—

MAIZE.—IMPORTS AND EXPORTS, AUSTRALIA, 1919-20 TO 1923-24.

Year.	Imports.		Exports.		Net Imports.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
1919-20	Bushels. 494,278	£ 158,361	Bushels. 6,632	£ 3,001	Bushels. 487,646	£ 155,360
1920-21	96,536	40,097	77,489	27,162	19,047	12,935
1921-22	45,066	9,791	36,320	9,023	8,746	768
1922-23	1,198,673	264,758	8,427	2,736	1,190,246	262,022
1923-24	2,572,809	515,468	37,918	9,524	2,534,891	505,944

6. **Prepared Maize.**—A small quantity of corn-flour is imported annually into Australia, the principal countries of supply being the United Kingdom and the United States of America. During the year 1923-24 the imports amounted to 435,248 lb., and represented a value of £6,390. The exports from Australia are small, and amounted to only 30,061 lb., valued at £735 in 1923-24.

7. **Value of Maize Crop.**—The value of the Australian maize crop for the season 1923-24 has been estimated at £2,050,246, made up as follows:—

MAIZE.—VALUE OF CROP, 1923-24.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	F.C.T.	Australia.
	£	£	£	£	£	£	£
Aggregate value ..	1,078,460	329,564	641,219	443	320	240	2,050,246
Value per acre ..	£6/9/3	£11/6/6	£5/6/9	£4/14/3	£7/8/10	£5/17/1	£6/9/8

§ 7. Barley.

1. **Progress of Cultivation.**—(i) *Area and Yield.* The area under barley in Australia has fluctuated very considerably, but results for the past ten years show a marked rise. The average annual area sown for the decennium 1914 to 1924 amounted to 251,510 acres, which was nearly double the average of the previous ten-yearly period, i.e., 135,368 acres. Victoria was originally the principal barley-growing State, but the rapid expansion of the cultivation of this crop in South Australia during recent years brought the latter State into the lead in 1913-14, and, during 1923-24, the area under barley in South Australia accounted for more than 71 per cent. of the Australian acreage. Victoria was next in importance with 22 per cent., leaving a small margin of about 7 per cent. distributed among the other States. The figures here given relate to the areas harvested for grain; small areas only are cropped for hay, while more considerable quantities are cut for green forage. These, however, are not included in this sub-section. The area and yield of barley for grain in the several States are shown in the following table for the last five years, while the progress since 1860 is illustrated in the graphs herein:—

BARLEY.—AREA AND YIELD, 1919-20 TO 1923-24.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
AREA.							
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1919-20 ..	5,354	85,323	3,275	157,897	9,167	6,293	267,309
1920-21 ..	5,969	93,954	15,908	202,079	10,686	6,151	334,747
1921-22 ..	5,031	100,127	7,730	170,887	7,894	7,241	298,910
1922-23 ..	3,899	102,773	5,292	215,283	9,243	5,706	342,196
1923-24 ..	4,350	56,564	665	184,286	8,673	4,230	258,775
YIELD.							
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
1919-20 ..	38,892	1,528,654	34,892	2,448,936	116,037	120,516	4,287,927
1920-21 ..	123,290	2,495,762	317,511	3,946,062	111,405	161,346	7,155,376
1921-22 ..	83,950	2,336,246	133,885	3,278,787	85,857	166,960	6,085,685
1922-23 ..	55,520	2,442,041	93,693	3,697,849	107,804	152,028	6,548,935
1923-24 ..	71,700	1,455,435	3,808	3,251,885	97,779	94,634	4,975,451

(a) Including Federal Capital Territory, 7 acres, 210 bushels.

The States in which the annual production of barley averaged over 1,000,000 bushels for the past decade were South Australia and Victoria, the yields being respectively 2,457,130 and 1,839,232 bushels, the higher return in the latter State tending to diminish the advantage held by South Australia in regard to acreage.

(ii) *Malting and other Barley.* (a) *Year 1923-24.* In recent years the statistics of all the States have distinguished between "malting" and "other" barley. Particulars for the season 1923-24 are as follows:—

BARLEY, MALTING AND OTHER.—AREA AND YIELD, 1923-24.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
Malting barley ..	2,039	39,588	589	166,824	4,744	3,829	217,613
Other barley ..	2,318	16,976	76	17,462	3,929	401	41,162
Total ..	4,357	56,564	665	184,286	8,673	4,230	258,775
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
Malting barley ..	29,260	1,037,144	3,312	2,986,617	55,317	84,358	4,196,008
Other barley ..	42,650	418,291	496	265,268	42,462	10,276	779,443
Total ..	71,910	1,455,435	3,808	3,251,885	97,779	94,634	4,975,451

(a) Includes Federal Capital Territory, 7 acres, 210 bushels.

The cultivation of malting barley is a special industry to meet the demands of the local brewing trade. Its expansion, however, appears to be restricted, although of late years the exports have considerably increased. Taking Australia as a whole, more than 84 per cent. of the area under barley in 1923-24 was sown with the malting variety. The proportion varies largely in the several States.

(b) *Progress of Cultivation.* The following table sets out the acreage and yield of malting and other barley in Australia as a whole during the past five seasons:—

BARLEY, MALTING AND OTHER.—AREA AND YIELD, AUSTRALIA, 1919-20 TO 1923-24.

Season.	Acres.			Bushels.			Average Yields per Acre.		
	Malting.	Other.	Total.	Malting.	Other.	Total.	Malting.	Other.	Total.
1919-20 ..	204,752	62,557	267,309	3,352,027	935,900	4,287,927	16.37	14.96	16.04
1920-21 ..	249,908	84,839	334,747	5,248,861	1,906,515	7,155,376	21.00	22.47	21.38
1921-22 ..	218,662	80,248	298,910	4,430,599	1,655,086	6,085,685	20.26	20.62	20.36
1922-23 ..	279,159	63,037	342,196	5,283,144	1,265,791	6,548,935	18.93	20.08	19.14
1923-24 ..	217,613	41,162	258,775	4,196,008	779,443	4,975,451	19.28	18.94	19.23
Average 10 seasons 1914-24	183,606	67,904	251,510	3,439,861	1,262,630	4,702,491	18.74	18.59	18.70

During the past ten seasons the area and production of malting barley have represented nearly three times the corresponding figures for other barley. The average yield per acre differs very little in respect of the two classes, the results for the past ten-yearly period being slightly in favour of the malting variety.

(iii) *Average Yield.* The average yield of barley per acre varies considerably in the different States, being as a rule highest in Victoria and Tasmania, and lowest in Western Australia. Details for each State during the past five seasons, and for the decennium 1914-24, are given in the following table:—

BARLEY.—YIELD PER ACRE, 1919-20 TO 1923-24.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
1919-20	7.26	17.92	10.65	15.51	12.66	19.15	16.04
1920-21	20.66	26.56	19.96	19.53	10.43	26.23	21.38
1921-22	16.69	23.33	17.32	19.19	10.88	23.06	20.36
1922-23	14.24	23.76	17.70	17.18	11.66	26.64	19.14
1923-24	16.48	25.73	5.73	17.65	11.27	22.37	19.23
Average for 10 seasons 1914-24	14.31	21.88	17.44	17.41	10.65	21.54	18.70

(iv) *Relation to Population.* During the last five seasons the quantity of barley produced in Australia has averaged 1 bushel per head of population. For the season 1923-24 the production ranged from 6 bushels per head in South Australia to 0.005 lbs. per head in Queensland. Details for the years 1919-20 to 1923-24 are as follows:—

BARLEY.—PRODUCTION PER 1,000 OF POPULATION, 1919-20 TO 1923-24.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
1919-20	19	1,017	47	5,085	354	574	808
1920-21	59	1,633	422	8,034	337	758	1,322
1921-22	39	1,506	174	6,524	256	764	1,104
1922-23	26	1,536	119	7,206	314	694	1,163
1923-24	32	895	5	6,197	276	432	865

2. *Comparison with Other Countries.*—(i) *Total Yield.* In comparison with the barley production of other countries, that of Australia appears extremely small. Particulars for some of the leading countries during recent years are as follows, the Australian figure being added for the purpose of comparison:—

BARLEY.—PRODUCTION IN VARIOUS COUNTRIES, 1919-23.

Country.	Yield in Bushels (000 omitted).		Country.	Yield in Bushels (000 omitted).	
	Average, 1919-1921.	1923.		Average, 1919-1921.	1923.
Soviet Republics ..	(a)150,943	208,980	Sweden	11,518	11,310
United States	149,214	190,254	Egypt	10,393	11,509
India (British) ..	126,874	139,642	Bulgaria	8,705	10,620
Japan	88,210	70,533	Italy	7,859	10,080
Spain	83,710	107,387	Lithuania ..	(a)7,302	7,639
Germany	78,921	104,109	Tunis	6,609	11,023
Canada	57,410	73,916	Syria	(b)6,544	(c)8,047
United Kingdom ..	(a)51,203	49,326	Irish Free State ..	(a)6,498	5,345
Rumania	46,240	59,632	Australia ..	5,840	4,975
Poland	39,240	72,995	Greece	5,782	6,817
Korea	36,356	29,492	Finland	5,361	3,628
Czecho-Slovakia ..	34,009	52,783	Latvia	(a)5,223	5,780
France	32,956	43,224	Norway	4,779	3,151
French Morocco ..	31,090	33,956	Austria	4,393	7,541
Denmark	24,569	31,159	Estonia	4,238	3,934
Hungary	(a)20,466	26,180	Chile	4,206	5,631
Algeria	20,290	45,040	Belgium	4,137	4,015
Jugo-Slavia	(a)11,876	13,502	Argentine Republic	3,910	11,674

(a) Average 1920-1922.

(b) Average for two years.

(c) Year 1922.

(ii) *Yield per Acre.* The following table shows the average yield of barley per acre in various countries of the world, the return ranging from 46.92 bushels in Belgium to 6.08 bushels in Tunis:—

BARLEY.—AVERAGE YIELD PER ACRE IN VARIOUS COUNTRIES, 1919-1923.

Country.	Yield in Bushels per acre.		Country.	Yield in Bushels per acre.	
	Average, 1919-1921.	1923.		Average, 1919-1921.	1923.
Belgium ..	46.92	48.38	Spain ..	18.05	23.66
Denmark ..	37.99	45.18	Austria ..	17.83	22.61
Irish Free State ..	(a)35.89	35.33	Lithuania ..	(a)17.82	17.67
Chile ..	30.87	38.74	Korea ..	17.51	13.59
United Kingdom ..	(a)30.70	33.15	Hungary ..	(a)17.15	23.27
Norway ..	30.66	25.28	Bulgaria ..	16.72	19.53
Japan ..	29.96	25.20	Estonia ..	15.77	12.61
Egypt ..	28.58	28.76	Italy ..	15.59	17.71
Sweden ..	28.56	28.80	Rumania ..	14.95	12.85
Germany..	27.55	32.37	Latvia ..	(a)14.87	13.31
Czecho-Slovakia ..	24.20	31.11	Greece ..	14.50	17.05
France ..	21.61	25.67	French Morocco ..	13.13	12.11
Canada ..	21.55	26.55	Jugo-Slavia ..	(a)12.83	15.15
United States ..	20.83	17.67	Soviet Republics ..	(a)11.28	13.15
Poland ..	20.62	24.63	Algeria ..	10.08	15.87
Australia..	19.44	19.23	Argentine Republic	6.15	18.16
Finland ..	18.90	13.11	Tunis ..	6.08	9.14
India (British) ..	18.80	18.87	Syria ..	(c)	(b)12.14

(a) Average 1920-1922.

(b) Year 1922.

(c) Not available.

3. *Price of Barley.*—The average price of barley in the Melbourne market during each of the past five years is given in the following table:—

BARLEY.—AVERAGE MELBOURNE PRICE PER BUSHEL, 1919 TO 1923.

Particulars.	1919.	1920.	1921.	1922.	1923.
	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>
Malting barley ..	5 9½	7 3	4 5	4 1½	4 0½
Cape barley ..	4 6½	6 3	3 5	3 0	3 1½

4. *Imports and Exports.*—The Australian export trade in barley has grown considerably in recent years, the average annual shipments during the last five years amounting to 2,052,596 bushels, as compared with an average of 200,836 bushels for the previous quinquennium. The grain was consigned mainly to the United Kingdom and Belgium, South Australia being the principal exporting State. Particulars of the Australian overseas imports and exports for the years 1919-20 to 1923-24 are contained in the following table:—

BARLEY.—IMPORTS AND EXPORTS, AUSTRALIA, 1919-20 TO 1923-24.

Year.	Imports.		Exports.		Net Exports.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	Bushels.	£	Bushels.	£	Bushels.	£
1919-20	438	236	1,075,446	364,809	1,075,008	364,573
1920-21	20	45	3,209,734	778,615	3,209,714	778,570
1921-22	7,052	1,891	1,935,830	396,883	1,928,778	394,992
1922-23	34	18	2,213,184	432,326	2,213,150	432,308
1923-24	4	3	1,828,788	318,912	1,828,784	318,909

In some years there is an export of Australian pearl and Scotch barley, the total for 1923-24 reaching 111,284 lb., valued at £780. The trade for the year was mainly with Japan and South Africa.

5. Imports and Exports of Malt.—In pre-war times the imports of malt into Australia were fairly extensive, the supply being obtained principally from the United Kingdom. Since the outbreak of the war in 1914, however, imports have practically ceased, and in 1917-18 and 1920-21 fairly large quantities were exported to South Africa and Japan. Details of imports and exports for the years 1919-20 to 1923-24 are given hereunder:—

MALT.—IMPORTS AND EXPORTS, AUSTRALIA, 1919-20 TO 1923-24.

Year.	Imports.		Exports.		Net Exports.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	Bushels.	£	Bushels.	£	Bushels.	£
1919-20 .. ..	..	..	..	..	..	..
1920-21	5	3	139,908	80,575	139,903	80,567
1921-22	40	43	7,553	3,238	7,513	3,195
1922-23	28	63	4,618	2,006	4,590	1,943
1923-24	28	13	3,573	1,550	3,545	1,537

6. Value of Barley Crop.—The estimated values of the barley crop of Australia for the seasons 1919-20 to 1923-24 were £1,360,411, £1,522,915, £1,139,736, £1,220,703, and £879,811. The extent to which the several States have contributed to the total in 1923-24 is shown in the following table:—

BARLEY.—VALUE OF CROP (a), 1923-24.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	F.C.T.	Australia.
Total value ..	£17,250	£289,273	£836	£532,741	£17,801	£21,860	£50	£879,811
Value per acre	£3/19/4	£5/2/3	£1/5/2	£2/17/10	£2/1/1	£5/3/4	£7/2/10	£3/8/-

(a) Exclusive of the value of straw.

§ 8. Other Grain and Pulse Crops.

In addition to the grain crops already specified, the only other grain and pulse crops extensively grown in Australia are beans, peas, and rye. The total area under the two former crops for the season 1923-24 was 41,343 acres, giving a yield of 840,319 bushels, or an average of 20.33 bushels per acre, being greater than the average yield for the decennium ended 1923-24, which was 16.18 bushels per acre. The States in which the greatest area is devoted to beans and peas are Tasmania, Victoria and South Australia. The total area under rye in Australia during the season 1923-24 was 2,864 acres, yielding 42,741 bushels, and giving an average of 14.92 bushels per acre. This was higher than the average for the past ten seasons, which was 10.98 bushels per acre. Over 54 per cent. of the rye grown during the season was produced in New South Wales, and 26 per cent. in Victoria. In addition to these grain crops a small area of rice has for some years been cultivated in Queensland and the Northern Territory. The results obtained, however, have not up to the present been very satisfactory. Should rice-growing be seriously taken up in Australia, it is probable that large tracts of country in the northern parts of Queensland and Western Australia, and in the Northern Territory, will be found well suited to its cultivation.

§ 9. Potatoes.

1. *Progress of Cultivation.*—(i) *Area and Yield.* The principal potato-growing State is Victoria, which possesses peculiar advantages for the growth of the tuber. The rainfall is generally satisfactory, while the atmosphere is sufficiently dry to be unfavourable to the spread of Irish blight, consequently potatoes are grown in nearly every district except in the wheat belt. Tasmania comes next in order of importance, followed by New South Wales.

The area and production of potatoes in each State during the last five years are given hereunder:—

POTATOES—AREA AND YIELD, 1919-20 TO 1923-24.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Fed. Cap. Ter.	Australia.
AREA.								
1919-20 ..	Acres. 20,036	Acres. 53,918	Acres. 4,432	Acres. 3,411	Acres. 3,585	Acres. 28,511	Acres. 7	Acres. 113,900
1920-21 ..	27,667	62,687	8,770	4,811	4,254	32,000	6	140,195
1921-22 ..	29,491	63,895	9,553	5,795	3,612	36,795	3	149,144
1922-23 ..	22,556	61,741	7,649	5,749	3,621	34,407	12	135,735
1923-24 ..	21,850	59,306	6,127	5,239	4,761	37,040	29	134,352
YIELD.								
1919-20 ..	Tons. 49,962	Tons. 145,888	Tons. 7,844	Tons. 11,020	Tons. 13,240	Tons. 66,225	Tons. 24	Tons. 294,203
1920-21 ..	63,234	171,628	19,068	17,057	13,368	83,679	22	373,056
1921-22 ..	57,825	173,660	16,794	18,573	13,605	107,624	10	388,091
1922-23 ..	35,694	148,354	10,517	17,356	15,198	101,201	32	328,352
1923-24 ..	60,949	238,520	8,878	21,327	17,830	99,936	130	447,570

The production of potatoes in Australia decreased by about 23,500 tons during the past decade, the decline being confined to New South Wales and Tasmania. The average yield during the last ten years amounted to 348,640 tons, which is considerably below the maximum production of 507,153 tons obtained in 1906-7.

(ii) *Average Yield.* The suitability of the soil, climate, and general conditions for potato growing is evidenced by the satisfactory yields per acre which are generally obtained in Australia, despite the little attention paid to this crop, the average yield during the past ten seasons being 2.60 tons per acre. The lowest average yield is that obtained in Queensland with an average of 1.81 tons for the same period.

Particulars for each State for the seasons 1919-20 to 1923-24, and also for the past decennium, are given hereunder :—

POTATOES.—YIELD PER ACRE, 1919-20 TO 1923-24.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Fed. Cap. Ter.	Australia.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1919-20	2.49	2.71	1.77	3.23	3.69	2.32	3.43	2.58
1920-21	2.29	2.74	2.17	3.55	3.14	2.77	3.67	2.66
1921-22	1.96	2.72	1.76	3.21	3.77	2.92	3.33	2.60
1922-23	1.58	2.40	1.37	3.02	4.20	2.94	2.67	2.42
1923-24	2.79	4.02	1.45	4.07	3.74	2.70	4.48	3.33
Average for 10 seasons 1914-24	2.01	2.84	1.81	3.28	3.25	2.58	3.20	2.60

The decline in the average yield per acre in Australia was largely responsible for the decreased production during the last ten years. This decline was in evidence throughout the States with the exception of Victoria, and for Australia as a whole averaged 3 cwt. per acre. In Tasmania, where the decrease was highest, the average yield diminished by 17 cwt. during the past decennium. The comparatively low yield per acre is due to the neglect of rotation and parsimony in the application of manures. Rotation and manuring are carefully studied in many European countries, with the result that the production per acre is double that obtained in Australia.

(iii) *Relation to Population.* The average annual production of potatoes per head of the population of Australia for the past five seasons was approximately 148 lbs. In Tasmania, where this crop is of far greater importance in relation to population than is the case in any other State, the production per head in 1906-7 was nearly a ton, while for the past five seasons it has averaged about 8½ cwt. Details for the seasons 1919-20 to 1923-24 are as follows :—

POTATOES.—PRODUCTION PER 1,000 OF POPULATION, 1919-20 TO 1923-24.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Fed. Cap. Ter.	Australia.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1919-20	25	97	11	23	40	315	12	55
1920-21	30	112	25	35	40	417	11	69
1921-22	27	112	22	37	41	493	5	70
1922-23	16	93	13	34	44	462	13	58
1923-24	28	147	11	41	50	456	50	78

2. *Imports and Exports.*—Under normal conditions there is a moderate export trade in potatoes carried on by Australia principally with New Zealand, the Pacific Islands and the Philippine Islands. On the other hand, when the recurrence of droughts causes

a shortage in some of the States, importations are usually made from New Zealand. The quantities and values of the Australian oversea imports and exports of potatoes during the past five years are shown in the following table :—

POTATOES.—IMPORTS AND EXPORTS, AUSTRALIA, 1919-20 TO 1923-24.

Year.	Imports.		Exports.		Net Exports.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	Tons.	£	Tons.	£	Tons.	£
1919-20	2,614	41,391	1,455	22,954	—	1,159
1920-21	56	746	1,130	13,222	1,074	12,476
1921-22	59	499	2,540	21,611	2,481	21,112
1922-23	72	957	2,061	23,599	1,989	22,642
1923-24	38	639	3,951	29,974	3,913	29,335

NOTE.—The minus sign — signifies net imports.

3. Value of Potato Crop.—The estimated value of the potato crop of each State for the season 1923-24 is given in the following table, together with the value per acre :—

POTATOES.—VALUE OF CROP, 1923-24.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Fed. Cap. Ter.	Australia.
Total value ..	£406,330	£1,073,340	£131,505	£147,139	£168,122	£505,540	£870	£2,432,846
Value per acre	£18/11/11	£18/2/-	£21/9/3	£28/1/8	£35/6/3	£13/13/-	£30	£18/2/2

§ 10. Other Root and Tuber Crops.

1. Nature and Extent.—Root crops, other than potatoes, are not extensively grown in Australia, the total area devoted to them for the season 1923-24 being only 16,889 acres. The principal of these crops are onions, mangolds, sugar beet, turnips, and "sweet potatoes." Of these, onions, sugar beet and mangolds are most largely grown in Victoria, turnips in Tasmania, and sweet potatoes in Queensland. The total area under onions in Australia during the season 1923-24 was 5,334 acres, giving a yield of 35,351 tons, and averaging 6.63 tons per acre. The area devoted in 1923-24 to root crops other than potatoes and onions, viz., 11,555 acres, yielded 90,196 tons, and gave an average of 7.81 tons per acre. The areas and yields here given are exclusive of the production of "market gardens," reference to which is made further on.

2. Imports and Exports.—The only root crop, other than potatoes, in which any considerable oversea trade is carried on by Australia is that of onions. During the past five years 3,459 tons, valued at £54,594, were imported, principally from New Zealand, Japan, and the United States, while during the same period, the exports totalled 28,374 tons, valued at £274,699, and were shipped mainly to New Zealand, the Pacific Islands, the Philippine Islands, and the United States of America.

§ 11. Hay.

1. Nature and Extent.—(i) *Area and Yield.* As already stated, the chief crop in Australia is wheat grown for grain. Next in importance is hay, which for the season ended 1923-24 averaged over 20 per cent. of the total area cropped. In most European countries the hay consists almost entirely of meadow and other grasses, but in Australia a very large proportion is composed of wheat and oats. Large quantities of lucerne hay are made also, particularly in New South Wales and Queensland. The area under hay of all kinds in the several States during the last five years is given hereunder. The progress from 1860 onwards may be traced from the graph accompanying this chapter.

HAY.—AREA AND YIELD, 1919-20 TO 1923-24.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	N. Ter.	Fed. Cap. Ter.	Aus-tralia.
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AREA.

	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1919-20	936,729	1,116,998	48,843	590,835	327,498	102,908	100	1,671	3,125,582
1920-21	853,109	1,333,397	94,212	570,865	266,824	113,618	10	1,154	3,233,189
1921-22	749,738	1,159,135	98,155	559,285	335,561	91,443	12	1,190	2,994,519
1922-23	888,250	1,261,408	78,050	577,810	431,633	100,088	10	1,207	3,338,456
1923-24	1,022,118	1,277,606	46,909	631,267	329,534	97,183	10	1,599	3,406,226

YIELD.

	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1919-20	578,232	1,242,489	41,804	598,954	379,025	143,053	500	2,354	2,986,411
1920-21	1,372,801	1,984,854	116,709	769,050	264,244	176,798	20	1,855	4,686,331
1921-22	1,027,833	1,548,453	138,675	680,201	368,720	136,991	25	1,291	3,902,189
1922-23	1,059,529	1,665,089	101,069	697,189	457,371	167,282	10	1,450	4,148,989
1923-24	1,170,737	1,541,287	43,407	781,768	368,122	144,298	5	2,310	4,051,934

In all the States marked fluctuations occur yearly in the area under hay. These fluctuations are due to various causes, the principal being the variations in the relative prices of grain and hay, and the favourableness or otherwise of the season for a grain crop. Thus, crops originally sown for grain are frequently cut for hay owing to the improved price of that commodity, or owing to the fact that the outlook for grain is not satisfactory. On the other hand, improved grain prices or the prospect of a heavy yield will frequently cause crops originally intended for hay to be left for grain. The area under hay in Australia during the season 1915-16, *i.e.*, 3,597,771 acres, was the highest on record, whilst the average during the past decennium amounted to 2,990,204 acres.

(ii) *Average Yield.* The States in which the highest average yields per acre have been obtained during the last decennium are Tasmania, Queensland, and Victoria, in the two former of which States also the smallest areas are devoted to this crop. For the same period the lowest yield for Australia as a whole was that of 13 cwt. per acre in 1914-15; while the highest was that of 31½ cwt. in 1915-16, followed closely by 29 cwt.

obtained in 1920-21. The average for the decennium was 24 cwt. Particulars for the several States for the seasons 1919-20 to 1923-24, and the average for the last ten years, are given hereunder :—

HAY.—YIELD PER ACRE, 1919-20 TO 1923-24.

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N. Ter.	Fed. Cap. Ter.	Australia.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1919-20	0.62	1.11	0.86	1.01	1.16	1.39	5.00	1.41	0.96
1920-21	1.61	1.49	1.24	1.35	0.99	1.56	2.00	1.61	1.45
1921-22	1.37	1.34	1.41	1.22	1.10	1.50	2.08	1.08	1.30
1922-23	1.19	1.32	1.29	1.21	1.06	1.67	1.00	1.20	1.24
1923-24	1.15	1.21	0.93	1.24	1.12	1.48	0.50	1.44	1.19
Average for 10 seasons 1914-24	1.17	1.29	1.29	1.19	1.02	1.40	2.60	1.44	1.21

(iii) *Relation to Population.* During the past five seasons the Australian hay production per head of population has varied between $11\frac{1}{4}$ cwt. in 1919-20 and $17\frac{1}{2}$ cwt. in 1920-21; averaging over 14 cwt. per head for the period. Hay production per head of population is highest in South Australia. Details for the seasons 1919-20 to 1923-24 are given hereunder :—

HAY.—YIELD PER 1,000 OF POPULATION, 1919-20 TO 1923-24.

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N. Ter.	Fed. Cap. Ter.	Australia.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1919-20	284	827	57	1,244	1,158	681	110	1,227	563
1920-21	657	873	155	1,566	799	831	5	941	866
1921-22	483	998	180	1,353	1,100	627	7	625	708
1922-23	488	1,047	128	1,359	1,331	764	3	567	737
1923-24	530	948	54	1,490	1,040	659	1	881	705

(iv) *Varieties Grown.* Particulars concerning the kinds of crop cut for hay are furnished in the returns prepared by five of the States. In the case of Tasmania the bulk consists of oaten hay; full particulars, however, are not available for that State.

Details for the past five seasons are given in the following table :—

HAY.—VARIETIES GROWN, 1919-20 TO 1923-24.

Varieties.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
	Acres.	Acres.	Acres.	Acres.	Acres.
NEW SOUTH WALES—					
Wheaten	716,341	520,417	467,068	597,959	695,369
Oaten	171,113	259,022	203,074	216,136	241,161
Barley	1,718	1,832	899	1,265	1,584
Lucerne	46,542	70,995	77,527	72,337	83,256
Other	1,015	843	1,170	553	748
Total	936,729	853,109	749,738	888,250	1,022,118

HAY.—VARIETIES GROWN, 1919-20 TO 1923-24—*continued.*

Varieties.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
	Acres.	Acres.	Acres.	Acres.	Acres.
VICTORIA—					
Wheaten	417,221	165,502	130,181	213,219	163,826
Oaten	681,179	1,140,578	1,001,256	1,021,216	1,084,136
Lucerne, etc. ..	18,598	27,317	27,698	26,973	29,644
Total ..	1,116,998	1,333,397	1,159,135	1,261,408	1,277,606
QUEENSLAND—					
Wheaten	11,710	14,024	13,837	8,834	8,714
Oaten	2,488	19,229	12,480	4,542	1,344
Lucerne	29,348	53,059	67,183	60,042	33,505
Other	5,297	7,900	4,655	4,632	3,346
Total ..	48,843	94,212	98,155	78,050	46,909
SOUTH AUSTRALIA—					
Wheaten	450,371	329,543	325,769	359,834	381,962
Oaten	134,775	231,446	225,878	208,769	234,899
Lucerne	2,167	3,938	4,145	4,973	7,270
Other	3,522	5,938	3,493	4,234	7,136
Total ..	590,835	570,865	559,285	577,810	631,267
WESTERN AUSTRALIA—					
Wheaten	234,772	169,264	222,209	307,142	223,770
Oaten	91,152	96,228	111,386	123,232	103,723
Lucerne	206	146	125	142	175
Other	1,368	1,186	1,841	1,117	1,866
Total ..	327,498	266,824	335,561	431,633	329,534

Wheaten hay is the principal hay crop in New South Wales, South Australia, and Western Australia, oaten hay in Victoria and Tasmania, and lucerne in Queensland.

2. *Comparison with Other Countries.*—As already noted, the hay crops of most European countries consist of grasses of various kinds, amongst which clover, lucerne, sainfoin and rye grass occupy prominent places. The statistics of hay production in these countries are not prepared on a uniform basis, consequently any attempt to furnish extensive comparisons would be misleading. It may be noted, however, that in Great Britain the production of hay from clover, sainfoin, etc., for the year 1924 amounted to 3,507,000 tons from 2,167,358 acres, while from permanent grasses a yield of 5,466,000 tons of hay was obtained from 4,656,213 acres, giving a total of 8,973,000 tons from 6,823,571 acres, or about 26½ cwt. per acre.

3. *Imports and Exports.*—Under normal conditions hay, whether whole or in the form of chaff, is somewhat bulky for oversea trade, and consequently does not in such circumstances figure largely amongst the imports and exports of Australia. During 1923-24, 162 tons were imported, while the exports amounted to 10,237 tons, valued at £60,937, the principal purchases being made by New Zealand, the Philippine Islands, Malaya (British) and India.

4. Value of Hay Crop.—The following table shows the value and the value per acre of the hay crop of the several States for the season 1923-24 :—

HAY.—VALUE OF CROP, 1923-24.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Ter.	Fed. Cap. Ter.	Australia.
Total Value ..	£ 9,476,960	£ 6,165,148	£ 402,172	£ 2,638,467	£ 1,447,140	£ 562,770	£ 5	£ 19,090	£ 20,711,752
Value per acre	£9/5/5	£4/16/6	£8/11/6	£4/3/7	£4/7/10	£5/15/10	£0/10/0	£11/18/9	£6/1/7

§ 12. Green Forage.

1. Nature and Extent.—(i) *Area*. In all the States a considerable area is devoted to the production of green forage, mainly in connexion with the dairying industry. The total area so cropped during the season 1923-24 was 961,311 acres, to which New South Wales contributed nearly 53 per cent., or 429,765 acres, the bulk of which consisted of wheat deemed unsuitable for the production of grain or hay. Under normal conditions the principal crops cut for green forage are maize, sorghum, oats, barley, rye, rape, and lucerne, while small quantities of sugar-cane also are so used. Particulars concerning the area under green forage in the several States during each of the last five years are given in the following table :—

GREEN FORAGE.—AREA, 1919-20 TO 1923-24.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Ter.	Fed. Cap. Ter.	Australia.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1919-20	1,007,478	89,802	157,568	114,126	27,007	5,271	..	28	1,401,280
1920-21	112,003	79,524	142,554	40,678	26,620	5,575	..	..	406,954
1921-22	128,965	89,410	147,135	50,121	27,396	9,481	..	..	452,508
1922-23	499,679	102,451	188,636	61,000	32,997	9,073	..	35	893,871
1923-24	429,765	107,371	306,693	55,282	51,754	10,389	50	7	961,311

(ii) *Relation to Population*. Particulars of the area under green forage per 1,000 of the population for the seasons 1919-20 to 1923-24 are given hereunder :—

GREEN FORAGE.—AREA PER 1,000 OF POPULATION, 1919-20 TO 1923-24.

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Ter.	Fed. Cap. Ter.	Australia.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1919-20 ..	494	60	214	237	82	25	..	15	264
1920-21 ..	54	52	190	83	80	26	..	..	75
1921-22 ..	61	58	191	100	82	43	..	..	82
1922-23 ..	230	64	239	119	96	41	..	14	159
1923-24 ..	195	66	378	105	146	47	14	3	167

2. Value of Green Forage Crops.—The value of these crops is variously estimated in the several States, and the Australian total for the season 1923-24 may be taken approximately as £3,559,344, or about £3 14s. 1d. per acre.

§ 13. Sugar-cane and Sugar-beet.

1. *Sugar-cane.*—(i) *Area.* Sugar-cane for sugar-making purposes is grown only in Queensland and New South Wales, and much more extensively in the former than in the latter. Thus, of a total area of 237,280 acres under sugar-cane in Australia for the season 1923-24, there were 219,965 acres, or about 92½ per cent., in Queensland. Sugar-cane growing appears to have been started in Australia in or about 1862, as the earliest statistical record of sugar-cane as a crop is that which credits Queensland with an area of 20 acres for the season 1862-3. In the following season the New South Wales returns show an area of 2 acres under this crop. The area under cane in New South Wales reached its maximum in 1895-6 with a total of 32,927 acres. Thenceforward with slight variations it gradually fell to 10,490 acres in 1918-19, but from that year onwards considerable improvement has taken place, nearly 7,000 acres being added to the canefields during the past five years. In Queensland, although fluctuations in area are manifest, the general trend has been upwards, the acreage under cane for the season 1923-24 being the highest on record. The area under sugar-cane in Australia from 1919-20 is given in the following table, and particulars for earlier years may be seen from the accompanying graphs:—

SUGAR-CANE.—AREA, 1919-20 TO 1923-24.

Season.	New South Wales.		Queensland.		Australia.		
	Productive.	Unproductive.	Productive.	Unproductive.	Productive.	Unproductive.	Total.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1919-20 ..	4,827	5,741	84,877	63,592	89,704	69,333	159,037
1920-21 ..	5,519	5,863	89,142	73,477	94,661	79,340	174,001
1921-22 ..	5,400	7,380	122,956	61,557	128,356	68,937	197,293
1922-23 ..	5,879	8,704	140,850	61,453	146,729	70,157	216,886
1923-24 ..	6,733	10,582	138,742	81,223	145,475	91,805	237,280

(ii) *Productive and Unproductive Cane.* The areas given in the preceding table represent sugar-cane grown for purposes other than green forage. The whole area was not necessarily cut for crushing during any one season, there being always a considerable amount of young and "stand over" cane, as well as a small quantity required for plants. The season in which the highest acreage is recorded may not show the greatest area of productive cane cut for crushing, as was evidenced in 1923-24, when, although the total acreage established a record, the area cut was less than in the previous year.

(iii) *Yield of Cane and Sugar.* Queensland statistics of the production of sugar-cane are not available for dates prior to the season 1897-8. In that season the total for Australia was 1,073,883 tons, as against the maximum production of 2,879,092 tons in 1917-18. The second highest yield was in the season 1921-22, with a total of 2,436,890 tons. The average production of cane during the decennium ended 1923-24 was 1,954,834 tons. The three highest yields of sugar were in 1917-18, 1922-23, and 1921-22, the quantities

being 327,589 tons, 306,365 tons, and 300,004 tons respectively. The decennial average was 237,627 tons of sugar. Particulars relative to the total yields of cane and sugar for the past five years are as follows :—

SUGAR-CANE.—YIELD OF CANE AND SUGAR, 1919-20 TO 1923-24.

Season.	New South Wales.		Queensland.		Australia.	
	Cane.	Sugar.	Cane.	Sugar.	Cane.	Sugar.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1919-20 ..	91,321	10,837	1,258,760	162,136	1,350,081	172,973
1920-21 ..	131,313	15,124	1,339,455	167,401	1,470,768	182,525
1921-22 ..	149,474	17,806	2,287,416	282,198	2,436,890	300,004
1922-23 ..	147,992	18,580	2,67,990	287,785	2,35,982	306,365
1923-24 ..	132,084	16,829	2,045,808	269,175	2,177,892	236,004

The cane cut in 1924 was approximately 3,170,000 tons. The season was very favourable, and, while on account of the heavier rainfall the sugar content of the cane was not so high as in the two previous years, the record yield of 435,768 tons of sugar was obtained from the crushing. In accordance with the agreement made by the Commonwealth Government respecting the yields for the three years 1920, 1921, and 1922, the sugar industry progressed considerably. The guaranteed price induced mill-owners to make considerable additions to plant, thereby increasing the efficiency of the mills, while farmers in nearly every district put new areas under cane, using in many cases land that had lain unproductive for years.

A preliminary estimate of the production of sugar in 1925 places the amount at 500,000 tons, but later advices, particularly from the southern districts of Queensland, show that this figure will have to be materially reduced.

Large quantities of molasses are produced as a by-product in the sugar mills; details for a series of years of the quantity produced and proportions used for distilling, fuel, manure and other purposes will be found in Chapter XXII.—“Manufacturing.”

(iv) *Average Yield of Cane and Sugar.* The average yield per acre of productive cane is much higher in New South Wales than in Queensland, the average during the last decade being 25.37 tons for the former and 16.86 for the latter State. For some years prior to 1910-11, the yield in New South Wales remained practically constant at about 21 tons per acre. Since that year, the average yield per acre has shown an upward tendency, reaching 30 tons or over during 1913-14, 1914-15, and 1917-18. The climatic conditions affecting the long coastal area where this industry is situated in Queensland are largely responsible for the great variations in the yields of sugar for that State, the figures ranging during the past decennium from 12.20 tons per acre in 1915-16 to 24.88 tons in 1917-18.

The greatest production of sugar per acre crushed during the past quinquennium occurred in 1917-18, when 2.87 tons were obtained, the respective crushings for New South Wales and Queensland averaging 3.56 and 2.83 tons. The average yield per acre for the past ten years was 2.99 tons in New South Wales, and 2.05 tons in Queensland.

(v) *Quality of Cane.* The quantity of cane required to produce a ton of sugar varies not only with the district in which the cane is grown, but also with the season, and for the decennium ended 1923-24 averaged 8.23 tons, the average production of sugar being 12.15 per cent. of the weight of cane crushed. The systematic study of beet culture in European countries has shown that by suitable methods the sugar contents of the root can be greatly increased, and it is believed that a similar improvement can be effected in the yield from sugar-cane.

SUGAR-CANE AND SUGAR.—YIELD PER ACRE, 1919-20 TO 1923-24.

Season.	New South Wales.			Queensland.			Australia.		
	Cane per acre Crushed.	Sugar per acre Crushed.	Cane to each ton of Sugar.	Cane per acre Crushed.	Sugar per acre Crushed.	Cane to each ton of Sugar.	Cane per acre Crushed.	Sugar per acre Crushed.	Cane to each ton of Sugar.
1919-20	Tons. 18.92	Tons. 2.25	Tons. 8.43	Tons. 14.83	Tons. 1.91	Tons. 7.76	Tons. 15.05	Tons. 1.93	Tons. 7.81
1920-21	23.79	2.74	8.68	15.03	1.88	8.00	15.54	1.93	8.06
1921-22	27.68	3.30	8.40	18.60	2.30	8.11	18.99	2.34	8.12
1922-23	25.17	3.16	7.97	15.39	2.04	7.53	15.78	2.09	7.56
1923-24	19.62	2.50	7.85	14.75	1.94	7.60	14.97	1.97	7.60
Average 10 seasons 1914-24 ..	25.37	2.99	8.50	16.86	2.05	8.20	17.28	2.10	8.23

The Bureau of Sugar Experiment Stations established in Queensland is rendering excellent service to the sugar industry in that State, by advocating and demonstrating better methods of cultivation, the use of green manures, lime, and fertilizers, together with the introduction and distribution of improved varieties of sugar cane.

(vi) *Relation to Population.* The yield of sugar in Australia during the five years 1919-20 to 1923-24 was not sufficient to supply local requirements, the average production during the period amounting to 101 lbs. per head of population, while the consumption was estimated to average 117 lbs. per head. Details for the period 1919-20 to 1923-24 are as follows:—

SUGAR.—PRODUCTION PER HEAD OF POPULATION, 1919-20 TO 1923-24.

State.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
	lbs.	lbs.	lbs.	lbs.	lbs.
New South Wales ..	12	16	19	19	17
Queensland	492	498	821	818	743
Australia	73	76	122	122	111

If estimated figures of the output for the years 1924 and 1925 be realized, the production during the five seasons ended 1925-26 will be considerably in excess of local requirements.

2. Sugar-beet.—(i) *Area and Yield.* The following table shows the acreage under sugar-beet, and the production in Victoria during the past five seasons:—

SUGAR-BEET.—AREA AND PRODUCTION IN VICTORIA, 1919-20 TO 1923-24.

Particulars.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
Area harvested .. acres	1,090	1,180	1,600	2,045	1,937
Production .. tons	13,195	7,147	16,577	20,444	29,512
Average per acre ..	12.11	6.06	10.36	10.00	15.24
Sugar produced ..	1,551	833	1,872	2,784	3,499

The 1923-24 season was a very favourable one in every respect. Growers were paid 37s. 6d. a ton for their beets, and a profit of £19,016 was realized by the Sugar-beet Factory as the result of the year's operations.

(ii) *Encouragement of Beet-growing.* During recent years an effort has been made to revive the sugar-beet industry in Victoria. The State Government is fast completing a comprehensive irrigation scheme at Maffra, where the sugar-beet factory is situated, which will make available for beet-growing large areas of land hitherto unsuitable. In view of the prospective expansion of the area under beet, the State Government has decided to remodel the factory plant, and the preliminary arrangements in connexion with this work are now in hand. A sum of £65,000 has been voted for the purpose, and an engineer has been appointed to proceed with the work. A fine grade of white sugar is manufactured at Maffra, and considerable quantities of beet pulp and molasses are distributed for stock feed.

3. Sugar Bounties.—The provision of bounties or similar aids to the sugar-growers of Australia early occupied the attention of the Commonwealth Parliament, the object in view being that of assisting the industry, and at the same time diminishing the employment of coloured labour in connexion therewith. An account of the various Acts in connexion with sugar bounties and sugar excise tariffs will be found on pages 394 to 396 of Year Book No. 6. In 1912 the Sugar Excise Repeal Act and the Sugar Bounty Abolition Act were passed by the Federal Parliament, conditionally on the Queensland Parliament approving of legislation prohibiting the employment of coloured labour in connexion with the industry. The State Sugar Cultivation Act, the Sugar Growers Act, and the Sugar Growers' Employees Act of 1913, having been approved of, the 1912 Federal Acts, which repeal all previous enactments in regard to excise on sugar and bounty on cane, came into force by proclamation in July, 1913.

4. Sugar Purchase by Commonwealth Government.—Particulars of the purchase by the Commonwealth Government of the Australian sugar output from 1915 onwards, together with the agreement made between the Commonwealth and Queensland Governments covering the three seasons ended 1922, will be found on page 277 of Year Book No. 15, 1922.

On the termination of the 1922 sugar season in June, 1923, the Commonwealth Government announced that the agreement fixing the price of raw sugar at £30 6s. 8d. per ton would not be renewed. The embargo against the importation of black-grown sugar was to be continued for a further period of two years from date, on condition that a pool, free from Commonwealth Government control, would be formed to buy raw sugar for the ensuing season at not more than £27 per ton, and to arrange with the Colonial Sugar Refining Company and the Millaquin Company for refining and distribution. Allowing three months for the disposal of the 57,500 tons of carry-over sugar, the retail price was to be reduced in October, 1923, to 4½d. per lb., while special concessions were to be made to manufacturers using sugar in goods for export.

The price of raw sugar in the 1924–25 season was to be fixed by a competent tribunal after investigation, such price not to exceed £27 per ton. The embargo was to be definitely withdrawn on 30th June, 1925, and after that date the sugar industry was to be protected from unfair competition by means of the Customs Tariff. In terms of the Commonwealth Government's proposals a tribunal was appointed in April, 1924, and, after investigation, determined that the present price of £27 per ton for raw sugar should be continued for the 1924–25 season.

A further agreement was reached between the Commonwealth and Queensland Governments in 1925, by which it was arranged that the embargo on the importation of foreign sugar should be extended for three years from 1st September, 1925. It was estimated that 60 per cent. of the production in 1925 would be required for home consumption, leaving the remaining 40 per cent. to be exported. The price payable for the raw sugar needed for home consumption was fixed at £27 per ton, less £1 per ton to defray administrative and general expenses of the Sugar Board, and to provide special concessions to certain consumers of sugar, while for that portion reserved for export the price was fixed at £9 10s. per ton, subject to realization adjustments.

5. Imports and Exports of Sugar.—The production of sugar in Australia during the five years ended 1923–24 was not sufficient to supply the growing requirements of Australian consumption. It was found necessary to import annually on the average

some 42,278 tons, valued at £2,045,205, the principal countries engaged in supplying this commodity being Java and Fiji. Particulars concerning the imports and exports of cane sugar for the past five years are as follows :—

CANE SUGAR.—IMPORTS AND EXPORTS, AUSTRALIA, 1919-20 TO 1923-24.

Year.	Oversea Imports.		Oversea Exports.		Net Imports.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	Tons.	£	Tons.	£	Tons.	£
1919-20	112,805	4,359,203	2,825	83,729	109,980	4,275,474
1920-21	116,274	6,560,373	4,190	220,965	112,084	6,339,408
1921-22	6,888	174,850	1,918	60,145	4,970	114,705
1922-23	4,551	87,317	5,127	159,897	- 576	- 72,580
1923-24	525	12,200	15,591	443,183	- 15,066	- 430,983

Note.—The minus sign (—) signifies net exports.

§ 14. Vineyards.

1. *Progress of Cultivation.*—(i) *Area of Vineyards.* The date of introduction of the vine into Australia has been variously set down by different investigators, the years 1815 and 1828 being principally favoured. It would seem, however, that plants were brought out with the first fleet which initiated the colonization of Australia in 1788, consequently the Australian vine is as old as Australian settlement. As already mentioned, a report by Governor Hunter gives the area under vines in 1797 as 8 acres. From New South Wales the cultivation spread to Victoria and South Australia, and these States have now far outstripped the mother State in the area under this crop. In Queensland and Western Australia also, vine-growing has been carried on for many years, but the progress of the industry in these States has been negligible. In Tasmania the climate is not favourable to the growth of grapes. The purposes for which grapes are grown in Australia are three in number, viz. :—(a) for wine-making, (b) for table use, and (c) for drying. The total area under vines in the several States during each of the last five years is given in the following table, while particulars from 1860 onwards may be gathered from the graph accompanying this chapter :—

VINEYARDS.—AREA, 1919-20 TO 1923-24.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1919-20	8,923	27,441	1,203	32,784	2,975	There are no vineyards in Tasmania.	73,326
1920-21	10,783	29,255	1,256	36,661	3,210		81,165
1921-22	12,583	33,175	1,281	41,424	3,951		92,414
1922-23	13,734	38,892	1,242	46,750	4,858		105,476
1923-24	14,559	42,599	1,269	49,303	5,235		112,965

The area under vines in Australia amounted to 65,673 acres in 1904-5. From that year onwards a gradual decline set in, and at the end of 1914-15 the acreage had decreased to 60,985. Since that date, however, as the result of satisfactory annual increases, the 1904-5 figure was soon exceeded, and the total for 1923-24 was the highest recorded.

The wine-growing industry in Australia, especially in Victoria and New South Wales, received a severe check by various outbreaks of phylloxera. With a view to the eradication of this disease extensive uprooting of vineyards in the infested areas was undertaken, while further planting within such areas, except with phylloxera-resistant stocks, was prohibited.

(ii) *Wine Production.* The production of wine has not increased as rapidly as the suitability of soil and climate would appear to warrant. The cause is probably twofold, being due in the first place to the fact that Australians are not a wine-drinking people, and consequently do not provide a local market for the product, and in the second to the fact that the new and comparatively unknown wines of Australia find it difficult to establish a footing in the markets of the old world, owing to the competition of well-known brands. Active steps are being taken in various ways to bring the Australian wines under notice, and it may be confidently expected that when their qualities are duly recognized, the wine production of Australia will increase. Particulars of the quantity of wine produced in the several States during the past five seasons are given in the table hereunder :—

WINE.—PRODUCTION, 1919-20 TO 1923-24.

Season.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Australia.
	Gallons.	Gallons.	Gallons.	Gallons.	Gallons.	No production of wine in Tasmania.	Gallons.
1919-20 ..	717,893	1,634,680	48,495	5,085,939	162,397		7,649,404
1920-21 ..	674,188	2,222,305	71,403	7,893,345	152,979		11,014,220
1921-22 ..	627,105	1,355,066	57,793	6,370,310	152,299		8,562,573
1922-23 ..	771,206	1,717,490	53,171	8,653,579	232,347		11,427,793
1923-24 ..	1,459,778	2,177,127	37,242	10,756,538	233,196		14,663,881

(iii) *Relation to Population.* In relation to population the areas of the vineyards of the several States show an upward tendency during the last five years, the Australian total increasing from 14 to 20 acres per 1,000 of the population during the period. Details for the seasons 1919-20 to 1923-24 are given in the succeeding table :—

VINEYARDS.—AREA PER 1,000 OF POPULATION, 1919-20 TO 1923-24.

Season.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Australia.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1919-20 ..	4	18	2	68	9	..	14
1920-21 ..	5	19	2	75	10	..	15
1921-22 ..	6	21	2	82	12	..	17
1922-23 ..	6	24	2	91	14	..	19
1923-24 ..	7	26	2	94	15	..	20

2. *Imports and Exports of Wine.*—(i) *Imports.* The principal countries of origin of wine imported into Australia are France, Spain, Portugal, and Italy, the bulk of the sparkling wines coming from France. Particulars relative to the importations of wine into Australia during the past five years are given hereunder :—

WINE.—IMPORTS, AUSTRALIA, 1919-20 TO 1923-24.

Year.	Quantity.			Value.		
	Sparkling.	Other.	Total.	Sparkling.	Other.	Total.
	Gallons.	Gallons.	Gallons.	£	£	£
1919-20 ..	34,383	57,211	91,594	118,164	50,112	168,276
1920-21 ..	39,665	63,824	103,489	135,169	58,248	193,417
1921-22 ..	7,398	37,814	45,212	20,781	35,830	56,611
1922-23 ..	15,368	43,199	58,567	41,305	32,692	73,997
1923-24 ..	21,770	54,988	76,758	56,069	38,434	94,503

(ii) *Exports.* The principal countries to which wine is exported from Australia are the United Kingdom and New Zealand, a small but fairly regular export trade being also carried on with India, Ceylon, and the Pacific Islands. Details concerning the exports of wine from Australia during the past five years are given in the following table :—

WINE.—EXPORTS, AUSTRALIA, 1919-20 TO 1923-24.

Year.	Quantity.			Value.		
	Sparkling.	Other.	Total.	Sparkling.	Other.	Total.
	Gallons.	Gallons.	Gallons.	£	£	£
1919-20 ..	6,112	795,049	801,161	12,482	221,741	234,223
1920-21 ..	9,669	1,098,678	1,108,347	19,105	291,856	310,961
1921-22 ..	2,177	602,853	605,030	5,451	155,487	160,938
1922-23 ..	2,607	703,710	706,317	5,626	159,368	164,994
1923-24 ..	3,601	987,703	991,304	7,180	210,132	217,312

3. Other Viticultural Products.—(i) *Table Grapes.* In addition to grapes for wine-making purposes, large quantities are grown in all the States for table use, while, particularly in Victoria and South Australia, the drying of raisins and currants is also carried on. The quantities of table grapes grown in the several States during the past five seasons are as follows :—

TABLE GRAPES.—PRODUCTION, 1919-20 TO 1923-24.

Season.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Australia.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1919-20 ..	2,678	3,502	613	1,129	2,161	..	10,083
1920-21 ..	2,660	2,471	649	955	2,088	..	8,823
1921-22 ..	2,914	3,075	602	1,027	1,894	..	9,512
1922-23 ..	3,513	3,304	570	1,314	2,344	..	11,045
1923-24 ..	3,983	2,726	1,038	1,056	2,662	..	11,465

(ii) *Raisins and Currants.* Statistics of the quantities of raisins and currants dried during each of the past five seasons are given in the following table :—

RAISINS AND CURRANTS.—QUANTITIES DRIED, 1919-20 TO 1923-24.

Season.	N. S. Wales.		Victoria.		South Aust.		Western Aust.		Australia.	
	Raisins.	Currants.	Raisins.	Currants.	Raisins.	Currants.	Raisins.	Currants.	Raisins.	Currants.
	cwt.	cwt.	cwt.	cwt.	cwt.	cwt.	cwt.	cwt.	cwt.	cwt.
1919-20 ..	7,084	2,465	211,307	55,661	58,502	80,400	3,923	5,090	280,816	143,616
1920-21 ..	4,448	2,469	116,887	62,919	39,534	65,307	7,308	5,856	168,177	136,551
1921-22 ..	6,696	4,189	190,451	75,042	66,083	78,534	6,790	6,371	270,020	162,136
1922-23 ..	11,253	5,768	285,520	98,081	69,261	96,807	6,748	9,250	372,782	209,906
1923-24 ..	16,967	6,658	438,827	150,867	125,006	131,000	9,606	15,769	590,406	304,294
Average 10 seasons 1914-24	6,582	3,185	191,704	73,014	56,110	70,324	4,106	5,056	258,502	151,579

4. Imports and Exports of Raisins and Currants.—The following table gives the oversea imports and exports of raisins and currants during each of the past five years :—

**RAISINS AND CURRANTS.—IMPORTS AND EXPORTS, AUSTRALIA,
1919-20 TO 1923-24.**

Year.	Oversea Imports.		Oversea Exports.		Net Exports.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
RAISINS.						
	lbs.	£	lbs.	£	lbs.	£
1919-20..	42,169	2,201	8,839,839	359,561	8,797,670	357,360
1920-21..	14,997	1,366	11,816,126	520,293	11,801,129	518,927
1921-22..	219,499	12,021	13,206,052	550,838	12,986,553	538,817
1922-23..	81,018	5,292	19,240,729	721,641	19,159,711	716,349
1923-24..	433,920	8,137	26,399,830	803,365	25,965 910	795,228
CURRANTS.						
1919-20..	2,877	120	7,947,811	246,382	7,944,934	246,262
1920-21..	3,573	300	5,994,580	208,743	5,991,007	208,443
1921-22..	3,577	102	10,941,175	344,238	10,937,598	344,136
1922-23..	3,236	90	14,502,772	404,184	14,499,536	404,094
1923-24..	4,267	178	16,458,561	420,380	16,454,294	420,202

The quantities of raisins and currants imported into Australia were generally greater than the exports for all years prior to 1912, when the increased production in Australia left a surplus available for export. During the last five years the value of the exports exceeded that of the imports by £4,729,818, the average annual excess for the quinquennium being £945,964.

§ 15. Orchards and Fruit Gardens.

1. Progress of Cultivation.—(i) *Area.* Fruit-growing has made rapid progress in Australia during recent years, the area devoted thereto having increased in the past ten years by nearly 60,000 acres. This figure would have been much larger if unsatisfactory marketing arrangements had not caused a temporary decline of 7,304 acres during the past two seasons. The States in which the decennial increase is most marked are :—New South Wales, 20,915 acres; Victoria, 18,387 acres; and Queensland, 9,496 acres. During the same period the South Australian fruit-growing area increased by 9,047 acres and the Tasmanian by 1,876 acres, while in Western Australia a decline of 1,799 acres took place since 1913-14. The total area under orchards and fruit gardens in the several States is given in the following table :—

ORCHARDS AND FRUIT GARDENS.—AREA, 1919-20 TO 1923-24.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Fed. Cap. Ter.	Australia.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1919-20 ..	72,802	86,336	24,636	30,617	19,815	37,687	1	271,894
1920-21 ..	75,904	87,768	26,927	31,364	19,570	37,013	5	278,551
1921-22 ..	75,746	89,491	28,035	32,295	19,012	36,565	5	281,149
1922-23 ..	73,134	86,014	29,431	33,003	19,405	34,689	11	275,687
1923-24 ..	72,372	85,570	29,568	33,472	18,776	34,076	11	273,845

(ii) *Varieties and Yield.* The varieties grown differ in various parts of the States, ranging from such fruits as the pineapple, paw-paw, mango, and guava of the tropics, to the strawberry, the raspberry, and the currant of the colder parts of the temperate zone. The principal varieties grown in Victoria are the apple, peach, pear, plum, orange, and apricot. In New South Wales, citrus fruits (orange, lemon, etc.) occupy the leading position, although apples, peaches, plums, pears and bananas are extensively grown. In Queensland, the banana, the pineapple, the orange, the apple, the peach, the plum, and the coconut are the varieties most largely cultivated. In South Australia, in addition to the apple, orange, apricot, peach, plum, and pear, the almond and the olive are extensively grown. In Western Australia, the apple, orange, pear, peach, plum, apricot and fig are the chief varieties. In Tasmania, the apple occupies nearly four-fifths of the fruit-growing area, but small fruits, such as the currant, raspberry, and gooseberry are extensively grown, while the balance of the area is taken up with the pear, apricot, plum, and cherry. The following table gives the acreage under the principal kinds of fruit, and the quantity and value of fruit produced. The acreages are exclusive of young trees not yet bearing. Although statistics of area are not collected annually in Victoria, the acreage under each class of fruit is estimated from data based on the triennial collection of the number of trees, subject to annual variations in the total area under orchards and fruit gardens :—

ORCHARDS AND FRUIT GARDENS.—VARIETIES AND YIELD, 1923-24.

Fruit.		N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Fed. Cap. Ter.	Australia.
Apples	.. acres	8,975	27,044	2,161	9,240	7,699	25,681	11	80,811
	bushels	521,821	1,663,308	105,852	1,143,274	517,247	1,889,826	950	5,842,278
	£	258,300	457,410	54,690	338,418	292,568	493,140	476	1,895,002
Apricots	.. acres	1,493	4,102	79	2,615	525	1,425	..	10,239
	bushels	140,874	352,604	2,570	178,476	43,484	110,439	..	828,447
	£	56,370	114,596	2,249	65,551	27,721	21,230	..	287,717
Bananas	.. acres	1,604	..	11,668	..	6	..	..	13,278
	bushels	142,475	..	1,465,321	..	345	..	..	1,608,141
	£	123,480	..	529,144	..	690	..	..	653,314
Pears	.. acres	2,183	1,182	302	425	407	..	..	4,499
	bushels	233,382	95,443	19,479	51,154	53,221	..	..	452,679
	£	58,350	38,177	9,902	17,904	13,638	..	..	137,971
Nectarines and Peaches	.. acres	7,080	9,326	2,208	2,739	923	63	..	22,339
	bushels	678,608	953,557	103,942	182,256	65,783	4,719	30	1,988,895
	£	197,360	250,858	58,979	62,903	44,165	1,050	10	615,325
Grapes	.. acres	18,429	3,280	2,499	3,719	2,482	..	..	30,409
	bushels	1,762,263	210,595	220,337	345,408	282,255	..	..	2,820,858
	£	671,390	115,827	137,711	138,163	108,880	..	..	1,171,971
Pineapples	.. acres	34	..	3,925	..	..	..	..	3,959
	dozen	4,000	..	982,418	..	..	..	..	986,418
	£	1,700	..	184,203	..	..	..	..	185,903
Pears	.. acres	3,028	8,574	286	1,902	1,043	1,936	..	16,769
	bushels	221,454	858,611	7,408	199,067	62,218	183,349	..	1,532,107
	£	74,610	193,187	5,649	53,009	29,100	43,760	..	399,315
Plums	.. acres	3,426	4,327	1,047	1,903	675	552	..	11,930
	bushels	230,147	241,818	38,977	137,262	48,901	50,654	..	747,759
	£	92,500	42,318	27,609	39,582	23,839	8,470	..	234,318
Other fruits	acres	3,354	6,874	2,221	3,613	708	2,384	..	19,154
	£	190,250	189,016	92,555	103,677	22,834	103,380	4	701,716
Total	.. acres	49,606	64,709	26,396	26,156	14,468	32,041	11	213,387
	£	1,724,310	1,401,389	1,102,691	819,207	563,435	671,030	490	6,282,552

(iii) *Relation to Population.* The acreage of the orchards and fruit gardens of Australia in relation to population has shown a tendency to decrease during the past five years. The Australian figure for 1923-24 amounted to .048 acres per head,

whilst the range amongst the States varied from .033 in New South Wales to .156 acres in Tasmania. Details for orchards and fruit gardens for the years 1919-20 to 1923-24 are as follows :—

**ORCHARDS AND FRUIT GARDENS.—AREA PER 1,000 OF POPULATION,
1919-20 TO 1923-24.**

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N. Ter.	Fed. Cap. Ter.	Aus- tralia.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1919-20 ..	36	57	33	64	61	180	..	0.5	51
1920-21 ..	36	57	36	64	59	174	..	3	51
1921-22 ..	36	58	36	64	57	167	..	2	51
1922-23 ..	34	54	37	64	56	158	..	4	49
1923-24 ..	33	53	37	64	53	156	..	4	48

2. Imports and Exports of Fruit.—(i) *General.* A considerable export trade in both fresh and dried fruits is carried on by Australia with overseas countries. The import trade in fresh fruits declined heavily during the past three years, owing to the imposition of a Customs duty of 1d. per lb. on imported bananas, which had hitherto been the chief item of fresh fruit imported into Australia, while the imports of dried fruits at present consist mainly of dates from Mesopotamia. The export trade in both fruits, however, has greatly expanded during the past quinquennium, the value of the shipments during 1923-24 amounting to £2,113,532. Apples constitute the bulk of the fresh fruits exported, although the export of citrus fruits is expanding, and experiments are being conducted in regard to the dispatch of other fruits. Shipments of raisins and currants have developed into large proportions since 1914-15, and are mainly responsible for the increase in the dried fruits exports. Other fruits in the dried state, notably apricots and peaches, are receiving attention from overseas, and in 1922-23 more than £100,000 was realized from these products.

(ii) *Fresh Fruits.* Information with regard to the Australian overseas trade in fresh fruits is given hereunder :—

FRESH FRUITS.—IMPORTS AND EXPORTS, AUSTRALIA, 1919-20 TO 1923-24.

Year.	Oversea Imports.		Oversea Exports.		Net Exports.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	lbs.	£	lbs.	£	lbs.	£
1919-20..	8,330,500	95,560	42,722,200	466,910	34,391,700	371,350
1920-21..	11,555,200	130,471	51,686,200	535,525	40,131,000	405,054
1921-22..	2,385,800	29,907	97,343,800	973,726	94,958,000	943,819
1922-23..	2,390,600	28,103	108,391,900	1,040,310	106,001,300	1,012,207
1923-24..	3,473,300	47,343	78,927,000	870,260	75,453,700	822,917

The value of the exports of apples in 1923-24 amounted to £677,315, and of citrus fruits to £45,939.

(iii) *Dried Fruits.* Particulars of overseas imports and exports of dried fruits for the last five years are as follows :—

DRIED FRUITS (a).—IMPORTS AND EXPORTS, AUSTRALIA, 1919-20 TO 1923-24.

Year.	Oversea Imports.		Oversea Exports.		Net Exports.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	lbs.	£	lbs.	£	lbs.	£
1919-20..	9,444,713	234,811	18,034,391	643,670	8,589,678	408,859
1920-21..	7,362,341	168,076	19,598,672	806,134	12,236,331	638,058
1921-22..	6,036,379	132,392	25, 55,733	969,457	19,919,354	837,065
1922-23..	10,957,699	189,397	36,047,962	1,232,124	25,090,263	1,042,727
1923-24..	11,091,310	167,366	43,581,329	1,243,272	32,490,019	1,075,906

(a) Including raisins and currants referred to under Vineyards, § 14, 4.

(iv) *Jams and Jellies.* The oversea trade in jams and jellies expanded considerably during the war years, and in 1918-19 the record shipment of 79,277,560 lbs., valued at £1,847,970, was dispatched from Australia. Since that year, however, there has been a heavy decline, and the value of the exports contracted to £77,465 in 1923-24. Particulars relative to imports and exports during each of the last five years are as follows:—

JAMS AND JELLIES.—IMPORTS AND EXPORTS, AUSTRALIA, 1919-20 TO 1923-24.

Year.	Oversea Imports.		Oversea Exports.		Net Exports.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	lbs.	£	lbs.	£	lbs.	£
1919-20..	179,480	9,913	44,793,409	1,218,997	44,613,929	1,209,084
1920-21..	379,401	14,543	16,535,335	550,403	16,155,934	535,860
1921-22..	184,993	8,437	5,640,579	164,046	5,455,586	155,609
1922-23..	151,572	8,253	2,605,554	79,396	2,453,982	71,143
1923-24..	138,219	7,597	2,680,047	85,062	2,541,828	77,465

(v) *Preserved Fruit.* Details concerning the quantities and values of preserved fruit imported into and exported from Australia cannot readily be obtained, owing to the fact that in the Customs returns particulars concerning fruit and vegetables are in certain cases combined. The total value of fruit and vegetables, preserved or partly preserved in liquid, or pulped, imported into Australia during 1923-24 was £111,915, and the corresponding value of exports was £498,331.

§ 16. Minor Crops.

1. *General.*—In addition to the leading crops previously dealt with in some detail, there are many others which, owing either to their nature, or to the fact that their cultivation has advanced but little beyond the experimental stage, do not occupy so prominent a position. Some of the more important of these are included under the headings—Market Gardens, Pumpkins and Melons, Nurseries, Grass Seed, Tobacco, Flax, Hops, and Millet. Cotton-growing has recently received considerable attention in the tropical portions of Australia, and the prospects of establishing this industry on a large scale are very favourable. The total area in Australia during the season 1923-24, devoted to crops not dealt with in previous sections, was 151,599 acres, to which cotton and market gardens contribute most largely.

2. **Market Gardens.**—Under this head are included all areas on which mixed vegetables are grown. Where considerable areas are devoted to the production of one vegetable, such for instance as the potato, the onion, the melon, the tomato, etc., the figures are usually not included with market gardens, but are shown either under some specific head, or under some general head as "Other Root Crops," or "All Other Crops." The area under market gardens during each of the last five seasons is given hereunder:—

MARKET GARDENS.—AREA, 1919-20 TO 1923-24.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N. Ter.	Fed. Cap. Ter.	Australia.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1919-20 ..	9,833	12,633	1,752	1,343	2,410	367	..	39	28,377
1920-21 ..	9,888	12,201	2,018	1,471	2,269	386	..	27	28,260
1921-22 ..	8,217	14,304	1,965	1,486	2,274	681	..	27	28,954
1922-23 ..	7,743	14,108	1,838	1,438	2,698	540	..	18	28,383
1923-24 ..	8,526	16,212	1,719	1,448	2,259	478	..	17	30,659

3. **Grass Seed.**—The total area under this crop during 1923-24, exclusive of New South Wales, for which State no figures as to area are available, was 5,092 acres, of which 3,448 acres were in Victoria, 629 acres in Tasmania, 610 acres in Queensland, and 405 acres in South Australia. The total yield for 1923-24, including New South Wales, was 63,386 bushels, valued at £45,756.

4. **Tobacco.**—Tobacco-growing has experienced marked fluctuations, although at one time it promised to occupy an important place amongst the agricultural industries of Australia. Thus, as early as the season 1888-89, the area under this crop amounted to as much as 6,641 acres, of which 4,833 were in New South Wales, 1,685 in Victoria, and 123 in Queensland. This promise of importance was, however, not fulfilled, and after numerous fluctuations, in the course of which the Victorian area rose in 1895 to over 2,000 acres, and that in Queensland to over 1,000 acres, the total area for the season 1920-21 had declined to 1,345 acres. The area increased during the past three years, and 2,783 acres were recorded in 1923-24, of which 1,450 acres were in New South Wales, 1,047 acres in Victoria, 276 acres in Queensland, and 10 acres in South Australia. Greater attention is now being paid to the proper treatment of the leaf, and flue-curing is becoming more general. In all the States in which its cultivation had been tried, the soil and climate appear to be very suitable for the growth of the plant, and the enormous importations of tobacco in its various forms into Australia furnish an indication of the extensive local market which exists for an article grown and prepared to meet the requirements of consumers. The value of the net importations of tobacco into Australia during the year 1923-24 amounted to £2,775,779, comprising unmanufactured tobacco £2,854,470, cigars £98,688, cigarettes £146,652, and snuff £1,548, while manufactured tobacco showed a balance in favour of exports amounting to £325,579.

5. **Pumpkins and Melons.**—The total area under this crop in Australia during 1923-24 was 12,192 acres, of which 4,386 acres were in New South Wales, 2,163 acres in Victoria, 4,795 acres in Queensland, 559 acres in Western Australia, 286 acres in South Australia, and 3 acres in the Federal Capital Territory. The production in all the States amounted to 40,561 tons.

6. **Hops.**—Hop-growing in Australia is practically confined to Tasmania and some of the cooler districts of Victoria, the total area for the season 1923-24 being 1,750 acres, of which 1,524 acres were in Tasmania, 224 acres in Victoria, and 2 acres in South Australia. The Tasmanian area, though still small, has increased considerably during the

past twenty years, the total for the season 1901-2 being only 599 acres. On the other hand the Victorian area, which in 1901-2 was 307 acres, had diminished to 224 acres in 1923-24, although increased acreages have been planted during each of the last four years. The cultivation of hops was much more extensive in Victoria some 40 years ago than at present, the area in 1883-84 being no less than 1,758 acres. During the year 1923-24 the exports of hops exceeded the imports by 747,789 lbs., the excess value being £79,316.

7. *Flax*.—For over twenty years flax has been grown intermittently in the Gippsland district of Victoria, and attempts have been made to introduce its cultivation into Tasmania and New South Wales, but without success. About the end of the year 1917 the shortage of flax fibre in the world had become acute, and a serious endeavour was made by the Commonwealth Government to encourage the cultivation of flax. The acreage in Victoria increased from 419 acres in 1917-18 to 1,611 acres in 1919-20, but the area had declined in 1923-24 to 6 acres. Flax products to the value of more than £1,500,000 are annually imported into Australia, and, as it has been demonstrated that flax can be grown to perfection here, a good prospect exists for the ultimate establishment of a local industry.

8. *Millet*.—Millet figures in the statistical records of three of the States. The total area devoted thereto in 1923-24 was 6,829 acres, of which 3,746 acres were in New South Wales, 2,626 in Victoria, and 457 in Queensland. The particulars here given relate to millet grown for grain and fibre, the quantity for green forage being dealt with in the section relating thereto.

9. *Nurseries*.—In all the States fairly large areas are occupied as nurseries for raising plants, trees, etc. Statistics of the area under flowers, fruit trees, etc., are available for New South Wales, Victoria, South Australia, and Western Australia. During 1923-24 the areas in those States were 554, 985, 169, and 123 acres respectively.

10. *Cotton*.—The cultivation of cotton commenced in Queensland in 1860, and ten years later the area cropped had increased from fourteen to upwards of fourteen thousand acres. The re-appearance of American cotton in the European market on the conclusion of the Civil War gave a severe set-back to the new industry, and the area continuously declined till 1888, when only 37 acres were planted. The industry was resuscitated soon after, and manufacturing was undertaken on two separate occasions at Ipswich, but operations were not at any time very extensive, and low prices over a term of years checked development. Added interest was shown in the crop in 1903, and in 1913 the Queensland Government made an advance of 1½d. per lb. on seed cotton, and ginned it on owner's account, the final return being equal to about 1½d. per lb.

Considerable interest has recently been manifested in cotton-growing, mainly as a result of the encouragement of the industry by the fixed advance of 5½d. per lb. for seed cotton of good quality for the three years ended 31st July, 1923. The Australian Cotton-Growing Association by establishing modern ginning-plants at convenient centres has also contributed to the flourishing condition of the industry.

The Department of Agriculture is introducing improved long-staple upland varieties, with a view to the production of cotton which will return a good aggregate yield and command also the highest price, while the Queensland Government, acting on expert advice, at first prohibited the growing of ratoon cotton, and ordered the destruction of the old shrubs and debris in the field, but has now relaxed the prohibition on the following conditions:—All growers of ratoon cotton must be registered. The Government guarantee will not apply to it, but reasonable advances will be made from time to time. It must be ginned and marketed separately, and there is a heavy penalty for mixing it with plant cotton. A close season will obtain, and all stalks and debris must be destroyed.

Cotton seed requires a fair amount of moisture and warmth for germination, and sowings in the latter part of September or in October are mostly favoured by Queensland growers. Cotton planted in such months should, in normal seasons, commence opening up during the latter part of March and continue on until the end of June. Particulars of the cotton crop in Queensland since 1919 are as follows :—

COTTON.—AREA AND YIELD, QUEENSLAND, 1919 TO 1925.

Year.						Area.(a)	Yield of Unginned Cotton.
						Acres.	lbs.
1919	..	..	..	..	..	72	27,470
1920	..	..	..	..	..	166	57,065
1921	..	..	..	..	..	1,944	940,126
1922	..	..	..	..	..	8,716	3,956,635
1923	..	..	..	..	..	40,821	12,543,770
1924 (b)	..	..	..	..	..	(c)	15,250,000
1925 (b)	..	..	..	..	..	(c)	24,000,000

(a) Area harvested.

(b) Estimated.

(c) Not available.

The figures given above show the development which has taken place during the past five years, and present indications point to the ultimate establishment of cotton-growing on a large scale in Australia.

The guarantee for the 1924-25 season was fixed at 5d. per lb. for cotton of less than $1\frac{1}{4}$ inch staple, and at 5½d. per lb. for cotton of a longer staple. Guaranteed prices for the forthcoming season have not yet been announced.

11. **Coffee.**—Queensland is the only State in which coffee-growing has been extensively tried, but the results have not been satisfactory. The area under crop reached its highest point in the season 1901-2 with 547 acres. In subsequent seasons the area fluctuated somewhat, but on the whole with a downward tendency, and in 1923-24 only 19 acres were recorded, with a yield of 10,616 lbs.

12. **Other Crops.**—Amongst miscellaneous small crops grown in the several States may be mentioned tomatoes, rhubarb, artichokes, arrowroot, chicory, and flowers.

§ 17. Bounties on Agricultural Products.

1. **General.**—The Bounties Acts of 1907 and 1912, passed by the Federal Parliament with the object of encouraging the manufacture and production of certain articles in Australia, included among the items on which bonuses were payable the following agricultural products :—Cotton, fibres, rice, coffee, tobacco, and dried fruits, except currants and raisins. Though the bonuses were fairly liberal, they were not availed of to any great extent. An Act was passed early in 1924 to provide for the payment of bounties on the production of canned apricots, peaches, pears and pineapples during 1924, and on the export thereof before 28th February, 1925. The rates of bounty were fixed at 9d. to 1s. per dozen tins, each containing 30 ozs. net, produced, and 1s. to 1s. 9d. per dozen tins exported, and the amount distributed in respect of both bounties was £64,752. Provision for the payment of 4s. per gallon on fortified wine, containing not less than 34 per centum of proof spirit, exported from the Commonwealth from 1st September, 1924, to 31st August, 1927, was contained in the Wine Export Bounty Act, also passed in 1924. Under the terms of this Act the sum of £28,417 was paid during 1924-25 on 142,085 gallons exported.

§ 18. Fertilizers.

1. **General.**—In the early days of settlement in Australia, scientific cultivation was practically neglected. Farmers were neither under the necessity nor were they aware of the value of supplying the proper constituents to the soil for each class of crop. The widely divergent character of the soils, their degeneration by repeated cropping, the limitations of climatic conditions, and the difficulties of following any desired order of rotation of crops, all rendered it essential to give attention to artificial manuring. The introduction of the modern seed-drill acting also as a fertilizer-distributor has greatly facilitated the use of artificial manures, and much land formerly regarded as useless for cultivation has now been made productive. There is reason to believe that this feature will be even more strikingly characteristic in the future.

2. **Fertilizers Acts.**—In order to protect the interests of users of artificial manures, legislation has been passed in each of the States, regulating the sale and preventing the adulteration of fertilizers. A list of these Acts and their main features will be found in Year Book No. 12 (page 378).

3. **Imports.**—The local production of artificial manures has greatly increased in recent years, and the home requirements of prepared fertilizers can now be supplied by Australian manufacturers. Imports of fertilizers are also expanding, but the bulk of the inward shipments consists of rock phosphates, which form the raw material for the home manufactured superphosphates, a fertilizer which has proved itself eminently suitable for the growing of cereals in Australian soils. During 1923-24 the values of rock phosphates imported represented more than 76 per cent. of the total importation of fertilizers. Nauru, with 68 per cent., was the largest contributor, Gilbert and Ellice Islands Colony coming next with 27 per cent., while the remainder was supplied by Surprise Island. Practically all of the soda nitrate came from Chile.

The imports of artificial manures during the last five years are given in the following table. Although considerable quantities of manufactured superphosphates were annually imported up till 1914-15, the importations of this fertilizer have now practically ceased :—

FERTILIZERS.—IMPORTS, AUSTRALIA, 1919-20 TO 1923-24.

Fertilizer.				1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
Bonedust	..	..	cwt.	1,508	1,260	910	..	542
"	..	..	£	1,420	652	556	..	164
Guano	..	..	cwt.	535,688	1,129,240	704,039	857,411	821,938
"	..	..	£	61,021	124,193	72,892	97,526	90,415
Superphosphates	..	..	cwt.	..	..	1,034	1,007	1,270
"	..	..	£	..	..	1,145	660	806
Rock Phosphates	..	..	cwt.	2,585,163	4,756,140	3,255,808	3,390,089	4,697,574
"	..	..	£	330,544	721,608	553,109	516,059	678,446
Soda Nitrate	..	..	cwt.	130,914	99,660	50,214	143,274	74,990
"	..	..	£	84,398	84,532	38,409	96,083	45,358
Other	..	..	cwt.	61,454	169	42,063	175,778	138,897
"	..	..	£	75,116	1,792	33,561	80,720	74,403
Total				3,314,727	5,986,469	4,054,068	4,567,559	5,735,211
				£ 552,499	932,777	699,672	791,048	889,592

4. Exports.—The subjoined table shows the exports of artificial manures for the years 1919-20 to 1923-24. Practically the whole of these fertilizers are manufactured locally, and are shipped mainly to New Zealand, Japan, Java, and the Pacific Islands :—

FERTILIZERS.—EXPORTS, AUSTRALIA, 1919-20 TO 1923-24.

Fertilizer.		1910-20.	1920-21.	1921-22.	1922-23.	1923-24.
Bonedust	.. .. cwt.	131,710	59,680	33,311	54,385	49,966
"	.. .. £	74,036	40,926	18,517	24,400	22,327
Guano	.. .. cwt.	601	..	..	..	..
"	.. .. £	181	..	..	..	..
Superphosphates	.. .. cwt.	264,174	472,860	26,727	73	22
"	.. .. £	67,288	153,060	6,284	35	7
Rock phosphates	.. .. cwt.	72,462	186,260	12,900	..	20
"	.. .. £	11,775	25,763	1,960	..	10
Soda nitrate	.. .. cwt.	28,223	2,720	5,790	600	405
"	.. .. £	28,673	3,640	5,717	715	315
Ammonia sulphate	.. .. cwt.	167,420	123,720	155,414	68,799	93,157
"	.. .. £	226,289	160,017	105,472	58,571	69,491
Other	.. .. cwt.	158,661	41,320	24,525	34,323	31,431
"	.. .. £	108,926	25,190	11,956	15,816	11,824
Total	.. .. cwt.	823,251	886,560	258,667	158,180	175,001
	.. .. £	517,168	408,596	149,906	99,537	103,974

5. Statistics of Use of Fertilizers.—Statistics regarding the use of manures are collected in all the States, and the particulars for 1923-24 are as follows :—

FERTILIZERS USED IN EACH STATE, 1923-24.

State.	Total Area of Crops.	Area Manured.		Manure Used.	
		Aggregate.	Percentage of Total Area of Crops.	Natural (Stable Yard, etc.).	Artificial.
	Acres.	Acres.	%	Loads.	Tons.
New South Wales ..	4,809,591	2,320,747	48.25	196,667	66,378
Victoria	4,682,144	4,113,640	87.86	163,843	178,621
Queensland	871,968	50,606	5.80	53,489	12,920
South Australia ..	3,562,551	3,110,497	87.31	91,650	121,184
Western Australia ..	2,323,070	2,291,405	98.63	59,565	92,055
Tasmania	279,122	197,346	70.70	25,656	17,431
Northern Territory ..	440	12	2.73	..	1
Fed. Cap. Territory ..	2,300	330	14.34	30	11
Total	16,531,186	12,084,583	73.10	590,900	488,601

Similar particulars in respect to Australia as a whole during the past five years are as shown below :—

FERTILIZERS USED IN AUSTRALIA, 1919-20 TO 1923-24.

Year.	Total Area of Crops.	Area Manured.		Manure Used.	
		Aggregate.	Percentage of Total Area of Crops.	Natural (Stable Yard, etc.).	Artificial.
	Acres.	Acres.	%	Loads.	Tons.
1919-20	13,296,407	9,278,296	69.78	562,545	329,489
1920-21	15,069,858	10,290,633	68.29	556,514	375,600
1921-22	15,357,024	10,999,259	71.62	582,725	408,742
1922-23	16,543,555	12,131,831	73.33	616,804	463,673
1923-24	16,531,186	12,084,583	73.10	590,900	488,601

The percentage of the area manured on the total area cultivated has advanced from 69.78 to 73.10 during the past five years, while the use of artificial manures has increased by 160,000 tons during the same period.

6. Local Production of Fertilizers.—Statistics relative to the local production of fertilizers are incomplete, and detailed returns for fertilizer factories other than bone mills are not available. The number of firms engaged in the manufacture of artificial manures in Australia at latest available date was 104, made up as follows :—New South Wales, 20; Victoria, 30; Queensland, 24; South Australia, 11; Western Australia, 11; and Tasmania, 8.

§ 19. Ensilage.

1. Government Assistance in Production.—The Government of Victoria, recognizing that defective methods of making ensilage were often adopted, has for some years been making special efforts to educate the farming community by lectures, the issue of bulletins, etc. The Government also undertakes the erection of different types of silos on very liberal terms, repayment extending over a series of years. Experts erect the silos and give practical lessons in regard to cutting and packing the silage. The New South Wales Government also gives advice in the "Agricultural Gazette," and issues special bulletins dealing with the subject, while silos have been erected at the various experimental farms.

2. Quantity Made.—Particulars concerning the number of holdings on which ensilage was made, and the quantity made during the seasons 1919-20 to 1923-24 are given in the following table :—

ENSILAGE MADE, 1919-20 TO 1923-24.

State or Territory.	1919-20.		1920-21.		1921-22.		1922-23.		1923-24.	
	Holdings.	Ensilage Made.	Holdings.	Ensilage Made.	Holdings.	Ensilage Made.	Holdings.	Ensilage Made.	Holdings.	Ensilage Made.
	(a) No.	Tons.	(a) No.	Tons.	(a) No.	Tons.	(a) No.	Tons.	(a) No.	Tons.
New South Wales ..	112	13,328	118	15,633	166	24,174	118	12,191	152	19,292
Victoria ..	74	8,072	99	9,702	107	5,873	103	5,674	61	3,640
Queensland ..	72	4,318	164	7,600	96	6,575	65	5,300	71	4,833
South Australia ..	15	1,435	25	1,618	26	1,849	20	2,595	24	2,838
Western Australia ..	5	211	12	390	7	361	12	331	20	1,506
Tasmania ..	7	275	11	490	10	544	12	437	9	372
Northern Territory ..	..	..	..	..	..	..	..	..	..	..
Total ..	285	25,630	429	35,431	412	39,396	334	26,528	337	32,580

(a) No. of holdings on which ensilage was made.

Following the drought of 1902-3 greater attention was paid to the making of ensilage, and during the four seasons ended 1909-10 there was an increase both in the number of holdings on which ensilage was made and in the quantity produced. The following five seasons, however, showed a falling-off, but the reduction was due to the fact that stocks had not been drawn upon to any great extent during the previous seasons. The accumulated stocks proved of great value during the 1914 drought, though far below what would have been the case if more attention had been paid to production during the previous years when there was a surplus of green forage. A substantial increase took place in 1915-16, both in the holdings on which ensilage was made and in the quantity produced, but during the next three years the production declined, particularly in Victoria. From 1918-19 satisfactory increases were recorded each year up to 1921-22, but the quantity made in each of the two following seasons was below that manufactured in 1921-22.

§ 20. Agricultural Colleges and Experimental Farms.

1. *General.*—In most of the States agricultural colleges and experimental farms have been established with a view to the promotion of more scientific methods in agriculture, stock-breeding and dairying. In the colleges, and on some of the farms, provision is made for the accommodation of pupils to whom both practical and theoretical instruction is given by experts in various branches of agriculture. Analyses of soils and fertilizers are made, manures are tested, and elementary veterinary science, etc., are taught, while general experimental work is carried on with cereal and other crops, not merely for the purpose of showing that it is practicable to produce certain crops in a given place, but also to show how it is possible to make farming pay in the locality. Opportunities are afforded for practice in general agricultural work, and instruction is given in the conservation of fodder; in cheese and butter-making; in the management, breeding, and preparation for the market of live stock; in the eradication of pests and weeds; and in carpentering, blacksmithing, and other trades.

Travelling expert lecturers visit the various agricultural and dairying centres, and there is a wide distribution of periodical agricultural gazettes and bulletins.

2. *Particulars of Agricultural Colleges and Experimental Farms.*—In previous issues of this volume detailed information was given regarding agricultural colleges, experimental farms, and agricultural education generally. See Year Book No. 11, pp. 393-5.

3. *Particulars respecting Agricultural and Stock Departments.*—A synopsis of the activities and operations of the Agricultural and Stock Departments of the several States as on 30th June, 1920, will be found in Year Book No. 14, pages 1180 to 1191. The main features of organization are set out under their respective headings as regards staff, expenditure, work undertaken in agricultural colleges, technical schools, experimental farms, and orchards and vineyards. The subject of lectures and other forms of agricultural instruction by experts is dealt with, as well as such matters as the distribution of plants, and the special steps taken to disseminate information amongst agriculturists, and to facilitate the marketing of products.

CHAPTER XVIII.

FARMYARD, DAIRY, AND BEE PRODUCTS.

§ 1. Introductory.

1. **General.**—The introduction of cattle into Australia, and the early history of the dairying industry are referred to in some detail in earlier issues of this work (see Official Year Book No. 6, p. 430). It may here be noted that the original stock has been crossed with specially imported stud cattle, while further judicious crossing of strains has resulted in an increased and improved milk supply. In Australia, dairy cattle thrive in the open throughout the year, local climatic conditions demanding no protection other than tree plantations for shelter, and rugging in the coldest weather. Indigenous and imported grasses furnish food during the greater part of the year, and winter fodder, when necessary, is given to the cattle in the fields. With the adoption of scientific methods in the treatment of animals and pasturages and in the processes of manufacture, coupled with effective State supervision, the dairying industry has shown rapid expansion.

2. **Official Supervision of Industry.**—Dairy experts, under the supervision of the various State Agricultural Departments, give instruction in approved methods of production, and inspect animals, buildings, and marketable produce. A high standard of cleanliness, both of personnel and *matériel*, prevails. Financial assistance of a temporary nature is also given, advances made being generally repaid with promptitude.

The export trade is regulated by the terms of the Commonwealth Commerce Act 1905 and regulations thereunder. The provisions of this Act are set out in detail in Official Year Book No. 6, pp. 431-2. It will be sufficient to note here that the true trade description, etc., must be marked on all produce intended for export, while official inspection ensures the maintenance of purity and quality. Upon request of the exporter the goods are certificated by the inspector.

3. **Mixed Farming.**—Dairying is not now, as formerly, wholly confined to farmers, since many graziers in a large way of business have lately given it their attention. In non-coastal regions it is generally carried on in conjunction with agriculture and sheep-raising, sufficient fodder being grown to carry the cattle through the winter months. Local wants are thus met, and in many places remote from the metropolis well-equipped factories have been established.

4. **Factory System.**—Cream separation and butter-making are often carried on together under the co-operative system. The creation of large central butter factories, supplied by numerous separating establishments or "creameries," has resulted in a considerable reduction in the cost of manufacture, since improved appliances such as refrigerators, may be profitably worked at the larger establishments. The product is also of a more uniform quality. The number of farmers who adhere to hand processes is rapidly diminishing. Formerly the average quantity of milk used per pound of hand-made butter was about 3 gallons, but separator butter requires only $2\frac{1}{2}$ gallons.

5. **Butter and Cheese Factories.**—The factories in Australia for the manufacture of butter, cheese, and condensed milk numbered 533 in 1923–24. These were distributed in the various States as follows:—New South Wales, 171; Victoria, 184; Queensland, 127; South Australia, 59; Western Australia, 9; and Tasmania, 33.

§ 2. Dairy Cattle and Dairy Products.

1. **Dairy Herds.**—The dairy herds of Australia were severely depleted during the drought of 1914–15, when the number of dairy cattle was reduced to 1,684,393. Following that year substantial increases have taken place, particularly since 1919, and the number recorded in 1923 represents a gain of nearly 300,000 in the past decade. In New South Wales, Victoria, South Australia, and Tasmania the proportion of dairy cattle to all cattle is high. In Queensland, the Northern Territory, and Western Australia there is a greatly preponderating number of other cattle, dairying not being firmly established in the tropical regions of the Continent. In Southern Queensland, however, the industry has developed remarkably during the last decade, and the progress attained in that area has been largely responsible for the Australian increases since 1912. The figures for the Northern Territory are rough estimates only:—

CATTLE, AND DAIRY CATTLE—NUMBER, 1919 TO 1923.

State.		1919.	1920.	1921.	1922.	1923.
New South Wales	{ All Cattle ..	3,075,954	3,367,880	3,538,240	3,244,905	2,932,437
	{ Dairy Cows ..	897,140	757,534	815,579	706,957	784,824
Victoria	{ All Cattle ..	1,831,120	1,575,159	1,750,369	1,785,660	1,591,367
	{ Dairy Cows ..	623,652	620,005	719,473	794,898	738,140
Queensland	{ All Cattle ..	5,940,433	6,455,067	7,047,370	6,955,463	6,396,514
	{ Dairy Cows ..	373,146	448,634	554,208	563,683	512,529
South Australia	{ All Cattle ..	349,562	376,399	419,197	425,811	413,272
	{ Dairy Cows ..	106,982	117,536	131,054	135,450	136,438
Western Australia	{ All Cattle ..	880,644	849,803	893,108	939,596	953,764
	{ Dairy Cows ..	42,993	47,719	53,828	58,387	61,832
Tasmania	{ All Cattle ..	214,442	208,202	216,704	218,197	220,351
	{ Dairy Cows ..	64,073	63,681	68,595	69,991	70,497
Northern Territory	{ All Cattle ..	610,534	659,840	568,031	760,766	843,718
	{ Dairy Cows ..	70	70	70	(a)	(a)
Federal Capital Territory	{ All Cattle ..	8,378	7,387	8,290	6,275	6,085
	{ Dairy Cows ..	480	459	414	443	375
Australia ..	{ All Cattle ..	12,711,067	13,499,737	14,441,309	14,336,673	13,357,508
	{ Dairy Cows ..	1,908,536	2,055,638	2,343,221	2,419,809	2,304,644

(a) Not available.

2. **Milk.**—The annual quantity of milk produced per dairy cow varies greatly with breed, locality and season, reaching as high as 1,000 gallons, but averaging for the whole of Australia, for all dairy cows and for all seasons, prior to 1916, considerably under 300 gallons per annum. Recently there has been an improvement in the grade of dairy cattle, and the 300 gallon mark has been exceeded on four occasions since 1916, the yield of 343 gallons in 1921 constituting a record. The average in 1923 was adversely affected by unfavourable seasonal conditions in New South Wales and Queensland. The best yields over a series of years appear to be in Victoria, South Australia and New South Wales, while Queensland and Tasmania in normal years are above Western Australia. In the following table the annual average yields per cow for the last five years are based on the number of dairy cows which were in milk during any part of the year. The average given is considerably below that for cows which were yielding during the greater part of the year. The highest averages were, of course, obtained in those States which have most extensively adopted scientific methods of dairying, such as systematic breeding, culling of herds, milk testing, etc.

MILK PRODUCTION, 1919 TO 1923.

Heating.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Fed. Cap. Ter.	Australia (b)
1919—								
Dairy Cows (a) .. No.	707,525	607,866	377,325	105,106	42,563	64,292	539	1,905,216
Production 1,000 gals.	203,707	196,884	71,856	30,899	9,608	16,503	90	529,547
Aver. per cow .. gals.	288	324	190	294	226	257	167	278
1920—								
Dairy Cows (a) .. No.	727,337	621,829	410,890	112,259	45,356	63,877	469	1,982,017
Production 1,000 gals.	250,998	204,522	104,659	34,657	10,234	19,000	105	623,275
Aver. per cow .. gals.	344	329	255	309	226	297	223	314
1921—								
Dairy Cows (a) .. No.	786,557	669,739	501,421	124,295	50,773	66,138	437	2,199,360
Production 1,000 gals.	285,166	245,181	151,081	41,398	11,329	21,000	105	755,260
Aver. per cow .. gals.	363	366	301	333	223	318	240	348
1922—								
Dairy cows (a) .. No.	806,268	757,186	558,945	133,252	56,108	69,293	428	2,381,480
Production 1,000 gals.	226,864	249,322	134,032	42,054	11,932	21,000	106	685,310
Aver. per cow .. gals.	281	329	240	316	213	303	248	288
1923—								
Dairy Cows (a) .. No.	790,890	766,524	538,106	135,944	60,110	70,244	409	2,362,227
Production 1,000 gals.	225,395	260,953	104,204	47,621	13,048	21,200	111	672,532
Aver. per cow .. gals.	285	340	194	350	217	302	271	285

(a) Mean for the year.

(b) Exclusive of Northern Territory.

3. **Butter and Cheese.**—Although the quantity of dairy production is largely affected by the nature of the seasons, the output of butter shows a steady increase in the past decade. During that period the average annual production increased from 189,000,000 lb. for the quinquennium 1909–1913 to 220,000,000 lb. for the latest five years under review. The marked development of dairying in Queensland, where the butter production has nearly doubled since 1913, was chiefly responsible for the increased butter output in Australia, although Victoria and New South Wales contributed largely to the general progress. The production of 267,071,340 lb. in 1921 was the maximum output of butter in Australia. This figure will probably be exceeded in 1924–25, for in that year the record export of 145,281,285 lb. was recorded, to which must be added the average amount required for local consumption, viz., 150,000,000 lb., making a total production of nearly 300,000,000 lb.

The manufacture of cheese has been steadily increasing throughout Australia during recent years, the 1921 production of 32,653,003 lb. being the highest yet recorded. The output of cheese has grown from 16 to 25 million lb. during the past ten years, or more than 55 per cent.

The development in dairy production since 1896, and in the exports of butter from 1901 onwards are shown in the graphs on page 660. Particulars for the past five years are as follows:—

BUTTER AND CHEESE PRODUCTION, 1919 TO 1923.

State.	1919.	1920.	1921.	1922.	1923.
BUTTER.					
	lb.	lb.	lb.	lb.	lb.
New South Wales	a63,127,160	a84,259,641	a100,652,620	a73,705,349	a72,660,613
Victoria	a60,218,945	a64,938,458	a82,981,570	a84,355,940	a86,888,725
Queensland	26,213,514	40,751,373	60,923,194	53,785,599	40,659,634
South Australia	a9,810,335	a11,897,279	a14,505,599	a14,646,632	a17,244,389
Western Australia	1,980,273	2,212,311	2,658,153	2,766,533	3,005,491
Tasmania	4,290,724	4,014,402	5,270,243	5,716,708	a6,183,521
Federal Capital Territory ..	a7,840	a8,400	a19,961	18,248	17,480
Australia	165,645,791	208,081,864	267,071,340	234,995,009	226,665,853
CHEESE.					
	lb.	lb.	lb.	lb.	lb.
New South Wales	a6,762,467	a6,407,209	a7,367,057	a5,198,905	a5,912,656
Victoria	a7,735,023	a3,636,571	a5,675,909	a3,754,960	a7,216,936
Queensland	8,296,318	11,512,262	15,200,527	10,560,316	7,221,355
South Australia	a2,540,183	a1,804,696	a3,392,400	a3,261,565	a3,679,552
Western Australia	821	354	1,073	212	4,365
Tasmania	861,460	709,432	1,016,037	934,601	a1,340,661
Australia	26,196,272	24,160,524	32,653,003	23,710,559	25,389,525

(a) For year ended 30th June of year following.

4. **Concentrated Milk.**—"Condensed" or "concentrated" milk represents milk the bulk of which is reduced by evaporation. The industry is of comparatively recent growth, the quantity of milk treated in 1901 being negligible, but production increased annually until in 1911 the output nearly doubled that of the previous year. Thenceforward rapid progress was made, the greatest development taking place in Victoria, where the industry is most largely established. There is still an import of milk, but the exports in each year far outweigh the quantity imported. No condensed or concentrated milk is made in South Australia, Western Australia, or Tasmania. In New South Wales, Victoria, and Queensland the returns for the last five years were as follows:—

CONDENSED, CONCENTRATED, OR POWDERED MILK MADE, 1919 TO 1923.

Year.	N.S.W.(a)	Victoria.(a)	Queensland.	Australia.
	lb.	lb.	lb.	lb.
1919	12,969,679	44,219,389	9,170,034	66,359,102
1920	14,938,147	42,643,871	13,362,464	70,944,482
1921	6,860,466	48,354,210	15,168,652	70,383,328
1922	3,544,565	38,314,260	9,601,914	51,460,739
1923	7,158,537	49,099,632	8,131,648	64,389,817

(a) For year ended 30th June of year following.

5. **Oversea Trade in Butter, Cheese, and Milk.**—The following tables give the imports, exports, and net exports of butter, cheese, and milk. In each of the five years the exports of butter, cheese, and condensed milk exceeded the imports.

**BUTTER, CHEESE AND MILK, IMPORTS AND EXPORTS.—AUSTRALIA,
1919-20 TO 1923-24.**

Products.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
IMPORTS.					
Butter lb.	36,774	33,762	732,336	2,955,934	2,368,102
" £	2,282	2,997	58,982	237,149	191,828
Cheese lb.	28,625	72,110	85,601	499,125	1,422,148
" £	2,988	8,371	7,518	27,345	71,379
Milk—concentrated and preserved(a)lb.	1,075,887	603,565	130,592	417,054	373,866
" £	49,029	30,883	14,658	28,371	26,652

EXPORTS.					
Butter lb.	39,006,304	92,420,995	127,579,797	79,571,151	65,984,020
" £	3,304,695	11,067,104	7,987,558	6,133,864	4,919,664
Cheese lb.	7,524,910	9,531,310	12,671,929	5,454,466	3,831,269
" £	377,905	514,252	438,372	231,907	142,820
Milk—concentrated and preserved(a)lb.	35,568,218	37,381,955	36,705,320	21,234,027	17,765,480
" £	1,606,310	2,189,167	2,132,580	1,328,762	1,080,088

NET EXPORTS.(b)

Butter lb.	38,969,530	92,387,233	126,847,461	76,615,217	63,615,918
" £	3,299,413	11,064,107	7,928,576	5,896,715	4,727,836
Cheese lb.	7,496,285	9,459,200	12,585,428	4,955,341	2,409,121
" £	374,917	505,881	430,254	204,562	71,441
Milk—concentrated and preserved(a)lb.	34,492,331	36,778,390	36,574,728	20,816,973	17,391,614
" £	1,557,281	2,158,284	2,117,922	1,300,391	1,053,436

(a) See definition above. (b) Excess of exports over imports.

6. **Local Consumption of Butter and Cheese.**—The total production of butter and cheese, with the subtraction or addition of the net export or import for the corresponding period gives approximately the quantity available for consumption in Australia. In the period considered hereunder the local supply of cheese was adequate :—

BUTTER AND CHEESE.—LOCAL CONSUMPTION, 1919 TO 1923.

Products.	1919.	1920.	1921.	1922.	1923.
	lbs.	lbs.	lbs.	lbs.	lbs.
Butter .. Total ..	120,679,261	115,694,631	139,491,548	158,379,792	163,049,935
„ .. Per head of population ..	23.88	21.38	25.32	28.12	28.36
Cheese .. Total ..	18,699,987	14,701,324	19,981,974	18,755,218	22,971,404
„ .. Per head of population ..	3.53	2.72	3.63	3.33	4.00

The quantity available for consumption in 1923 averaged more than 28 lbs. of butter and 4 lbs. of cheese per head of population, an amount probably unsurpassed anywhere. The consumption of butter and cheese in the United Kingdom in normal times is given as about 22½ lbs. per head per annum.

§ 3. Pigs and Pig Products.

1. **Pigs.**—The number of pigs in Australia from 1919 to 1923 is shown below :—

PIGS.—NUMBER, 1919 TO 1923.

State.	1919.	1920.	1921.	1922.	1923.
New South Wales (b) ..	253,338	305,967	383,326	340,579	322,762
Victoria (a) ..	186,810	175,275	230,770	294,962	259,795
Queensland ..	99,593	104,370	145,083	160,617	132,243
South Australia (b) ..	60,295	78,395	87,667	75,520	73,414
Western Australia ..	58,155	60,581	63,001	67,561	61,478
Tasmania (a) ..	35,530	38,116	49,743	46,056	47,101
Northern Territory ..	1,675	1,416	452	361	647
Federal Cap. Territory (b) ..	572	286	343	274	434
 Australia ..	 695,968	 764,406	 960,385	 985,930	 897,874

(a) As on 1st March of year following.

(b) As on 30th June of year following.

For many years the number of pigs in Australia has fluctuated considerably. There was a heavy falling off in 1915, followed by substantial increases during 1916 and 1917, the number in 1917 being the highest recorded in Australia. The total of 1,169,365 pigs in 1917 declined to 695,968 in the next two years, but the numbers were supplemented by increases during each of the next three years, while a decline of 90,000 in 1923 reduced the total number to 897,874. The number of pigs per head of population, and the number per square mile, will be found in the tables of live stock, page 661.

2. **Bacon and Ham.**—(i) *Production.* During the past five years the production of bacon and ham has fluctuated between the record quantity of 67,600,747 lb. manufactured in 1923, and 50,250,487 lb. in 1920, the average for the period amounting to 59,340,051 lb., which is far in excess of any previous five-yearly average.

BACON AND HAM.—PRODUCTION, 1919 TO 1923.

State.	1919.	1920.	1921.	1922.	1923.
	lb.	lb.	lb.	lb.	lb.
New South Wales(a) ..	16,657,362	16,249,762	20,413,330	19,234,681	19,044,294
Victoria(a) ..	19,385,509	15,139,100	17,396,798	19,269,125	22,540,973
Queensland ..	12,155,489	11,337,050	12,386,417	15,130,545	16,219,969
South Australia(a) ..	5,810,616	4,172,372	5,089,424	5,002,199	5,095,970
Western Australia(b) ..	2,609,284	2,077,662	1,962,621	2,050,220	2,420,585
Tasmania ..	1,128,096	1,267,061	1,356,329	1,778,015	2,271,141
Federal Cap. Territory(a)	12,236	7,480	9,540	11,185	7,815
Total ..	57,758,592	50,250,487	58,614,459	62,475,970	67,600,747

(a) For year ended 30th June of year following. (b) A portion only from pigs slaughtered in the State; balance imported and subsequently cured.

(ii) *Local Consumption.* From 1904 onwards the production of bacon and ham has been sufficient to meet the local demand, and provide a small surplus for export.

BACON AND HAM.—LOCAL CONSUMPTION, 1919 TO 1923.

Particulars.	1919.	1920.	1921.	1922.	1923.
	lb.	lb.	lb.	lb.	lb.
Total ..	54,732,706	47,151,519	55,926,806	60,753,826	66,372,107
Per head of population ..	10.32	8.71	10.15	10.78	11.54

3. *Oversea Trade in Pig Products.*—The oversea trade in pigs and pig products is shown in the following table:—

PIG PRODUCTS.—AUSTRALIAN TRADE, 1919-20 TO 1923-24.

Particulars.	1919-20	1920-21.	1921-22.	1922-23.	1923-24.
Pigs.					
Imports ..	No. 16	11	31	31	13
" ..	£ 94	65	194	596	376
Exports ..	No. 164	166	119	67	38
" ..	£ 1,044	1,199	990	510	288
Net Exports ..	No. 148	155	88	36	25
" ..	£ 950	1,134	796	-86	-88

BACON AND HAM.

Imports ..	lb. 15,047	14,610	25,292	149,270	320,030
" ..	£ 1,067	1,479	1,610	8,414	19,005
Exports ..	lb. 3,040,933	3,113,578	2,712,945	1,871,414	1,548,670
" ..	£ 258,890	323,280	223,067	158,414	132,581
Net Exports ..	lb. 3,025,886	3,098,968	2,687,653	1,722,144	1,228,640
" ..	£ 257,823	321,801	221,457	150,000	113,576

NOTE.—The minus sign — signifies net imports.

PIG PRODUCTS.—AUSTRALIAN TRADE, 1919-20 TO 1923-24—*continued*.

Particulars.		1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
LARD.						
Imports	lb.	22,001	42,795	115,659	505,827	574,733
"	£	1,092	1,825	3,625	12,905	17,181
Exports	lb.	7,969,444	3,118,105	2,909,658	1,358,291	651,530
"	£	375,910	153,084	88,753	38,491	24,027
Net Exports ..	lb.	7,947,443	3,075,310	2,793,999	852,464	76,797
"	£	374,818	151,259	85,128	25,586	6,846
FROZEN PORK.						
Imports	lb.	..	..	..	370,094	1,679,278
" .. ..	£	..	..	..	14,486	63,908
Exports	lb.	371,397	163,303	152,584	144,796	53,142
"	£	19,149	9,370	7,414	6,282	2,099
Net Exports ..	lb.	371,397	163,303	152,584	- 225,298	- 1,626,136
"	£	19,149	9,370	7,414	- 8,204	- 61,809

NOTE.—The minus sign - signifies net imports.

The output of pig products in Australia is usually more than sufficient to meet local requirements, and a small export trade is being built up.

During the last five years the value of the average annual net export amounted to nearly £350,000, the bulk of the shipments consisting of bacon, ham and lard.

§ 4. Total Dairy Production.

The total dairy production of Australia in 1923 is shown below :—

TOTAL DAIRY PRODUCTION.—AUSTRALIA, 1923.

Particulars.	N.S.W. (a)	Victoria. (a)	Q'land.	S. Aust. (a)	W. Aust.	Tasmania. (a)	Fed. Cap. Ter. (a)	Total.
MILK.								
Used for—	gallons.	gallons.	gallons.	gallons.	gallons.	gallons.	gallons.	gallons.
Butter ..	165,610,507	197,624,780	83,903,988	36,445,242	7,060,404	13,882,000	55,430	504,582,351
Cheese ..	6,259,057	7,048,050	7,244,735	3,490,059	4,325	1,343,340	..	25,389,566
Condensing and con- centrat- ing ..	3,059,023	11,648,570	2,181,379	..	..	..	..	16,888,972
Other pur- poses ..	50,466,053	44,630,980	10,873,775	7,685,858	5,983,378	5,974,660	55,930	125,670,634
Total ..	225,394,640	260,952,380	104,203,877	47,621,159	13,048,107	21,200,000	111,360	672,531,523
BUTTER.								
In Factories	lb.	lb.	lb.	lb.	lb.	lb.	lb.	lb.
On Dairy	68,030,162	81,291,595	38,417,853	13,311,698	1,715,749	4,264,565	..	207,031,622
and other								
Farms ..	4,636,451	5,597,130	2,241,781	3,932,691	1,280,742	1,918,956	17,480	19,634,231
Total ..	72,666,613	86,888,725	40,659,634	17,244,389	3,005,491	6,183,521	17,480	226,665,853

(a) For year ended 30th June, 1924.

TOTAL DAIRY PRODUCTION.—AUSTRALIA, 1923—*continued*.

Particulars.	N.S.W. (a)	Victoria. (a)	Q'land.	S. Aust. (a)	W. Aust.	Tasmania. (a)	Fed. Cap. Ter. (a)	Total.
CHEESE.								
In Factories	lb. 5,834,440	lb. 6,796,386	lb. 7,210,295	lb. 3,679,390	lb. ..	lb. 943,629	lb. ..	lb. 24,464,140
On Dairy and other Farms ..	78,216	420,550	11,060	162	4,365	402,032	..	916,385
Total ..	5,912,656	7,216,936	7,221,355	3,679,552	4,365	1,345,661	..	25,380,525

CONDENSED, CONCENTRATED, OR POWDERED MILK.

In Factories	lb. 7,158,537	lb. 49,099,632	lb. 8,131,648	lb. ..	lb. ..	lb. ..	lb. ..	lb. 64,389,817
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BACON AND HAM.

In Factories	lb. 17,693,376	lb. 20,458,243	lb. 15,814,185	lb. 4,432,350	lb. 2,169,953b	lb. 1,488,809	lb. ..	lb. 62,056,916
On Dairy and other Farms ..	1,350,918	2,082,730	405,784	663,620	250,632	782,332	7,815	5,543,831
Total ..	19,044,294	22,540,973	16,219,969	5,095,970	2,420,585	2,271,141	7,815	67,600,747

(a) For year ended 30th June, 1924. (b) A portion only from pigs slaughtered in the State, the balance being imported and subsequently cured.

§ 5. Poultry Farming.

1. **General.**—Poultry stocks are largely maintained by farmers, and production therefrom furnishes a considerable addition to the annual agricultural or dairying returns. During recent years, however, poultry-keeping has assumed an independent position among rural industries, while it is also carried on in conjunction with pig-farming. Special poultry farms have been instituted for scientific breeding, and poultry experts give lectures and instruction. Poultry for consumption is extensively reared, and the egg-producing qualities of the birds have been greatly improved by careful breeding. Co-operative egg-collecting circles have been formed in some districts; eggs are also delivered with the milk and cream to the local butter factories, and thence forwarded to market.

2. **Poultry Products.**—There is some difficulty in obtaining complete figures for the yield of poultry products. The following values relate to poultry and eggs :—

POULTRY AND EGGS.—VALUE OF PRODUCTION, 1919-20 TO 1923-24.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania. (a)	Australia.
	£	£	£	£	£	£	£
1919-20 ..	2,814,000	3,579,230	356,590	924,986	191,288	300,000	8,166,094
1920-21 ..	3,196,000	4,545,620	449,827	1,164,999	189,658	300,000	9,846,104
1921-22 ..	2,650,000	4,406,750	429,983	1,027,634	208,429	300,000	9,022,796
1922-23 ..	2,894,000	4,315,810	417,052	1,066,137	240,423	300,000	9,233,422
1923-24 ..	2,443,160	4,587,560	364,681	1,088,105	252,527	300,000	9,036,033

(a) Estimated.

3. **Oversea Trade in Poultry Products.**—The Australian oversea trade in live or frozen poultry is insignificant, although the export of frozen poultry is increasing. During the three years ended 1922-23 fairly large consignments were forwarded from New South Wales mainly to the United States of America. The imports and exports of eggs and egg-contents show a balance on the side of exports. The export trade in eggs has expanded considerably during the last five years, and in 1922-23 the number exported amounted to 1,209,283 dozen, the bulk of which were shipped from New South Wales to the United Kingdom. The number of eggs imported into Australia during the last five years amounted to 119,898 dozen, of which number China supplied 110,257 dozen, or nearly 92 per cent.

POULTRY PRODUCTS, TRADE.—AUSTRALIA, 1919-20 TO 1923-24.

Particulars.			1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
LIVE POULTRY.							
Imports	..	No.	721	484	663	791	881
"	..	£	1,564	850	1,170	1,534	3,981
Exports	..	No.	2,477	2,886	2,626	2,872	2,234
"	..	£	2,448	2,741	3,272	2,682	1,707
Net Exports	..	No.	1,756	2,402	1,963	2,081	1,353
"	..	£	884	1,891	2,102	1,148	-2,274
FROZEN POULTRY.							
Imports	..	lb.	10,273	4,087	2,712	4,784	5,438
"	..	£	602	328	178	228	269
Exports	..	pair	13,346	22,376	50,367	34,399	10,882
"	..	£	10,760	29,963	50,205	42,951	11,270
Net Exports	..	(a)	(a)	(a)	(a)	(a)	(a)
"	..	£	10,158	29,635	50,027	42,723	11,001
Eggs.							
Imports	..	doz.	4,015	27,452	33,558	26,750	28,123
"	..	£	230	1,802	1,994	1,591	1,707
Exports	..	doz.	211,034	413,602	808,849	1,236,033	655,620
"	..	£	17,461	53,932	75,857	102,946	52,743
Net Exports	..	doz.	207,019	386,150	775,291	1,209,283	627,497
"	..	£	17,231	52,130	73,863	101,355	51,036
Egg-CONTENTS.							
Imports	..	lb.	4,992	23,898	26,590	33,672	34,418
"	..	£	1,523	4,446	4,091	5,250	7,845
Exports	..	lb.	(a)	(a)	(a)	(a)	(a)
"	..	£	48,675	27,298	12,116	38	212
Net Exports	..	lb.	(a)	(a)	(a)	(a)	(a)
"	..	£	47,152	22,852	8,025	-5,212	-7,633

NOTE.—The minus sign — signifies net imports. (a) Quantity not available.

§ 6. Bee Farming.

1. **General.**—As is the case with poultry-farming, bee-farming is frequently carried on in connexion with agriculture or dairying. The returns of honey from productive hives during 1923-24 gave an average of 45½ lb. per hive, while the average quantity of wax was 0.65 lb. per hive.

2. Production of Honey and Beeswax.—The number of hives and the production of honey and beeswax during the year 1923-24 are given in the following table :—

BEE-HIVES, HONEY, AND BEESWAX, 1923-24.

State.	Bee Hives.			Honey Produced.		Beeswax Produced.	
	Pro- ductive.	Unpro- ductive.	Total.	Quantity.	Value.	Quantity.	Value.
	No.	No.	No.	lb.	£	lb.	£
New South Wales ..	19,979	11,748	31,727	590,800	12,062	12,701	910
Victoria ..	39,482	21,278	60,760	2,110,713	48,370	25,371	1,900
Queensland ..	10,788	4,328	15,116	505,346	9,125	7,405	460
South Australia ..	13,492	9,010	22,502	721,640	11,276	11,216	689
Western Australia ..	8,656	4,123	12,779	395,047	7,635	5,637	384
Tasmania ..	5,681	1,891	7,572	133,330	3,334	1,596	106
Fed. Cap. Territory..	8	26	34	180	4	2	..
Australia ..	98,086	52,404	150,490	4,457,056	91,806	63,928	4,449

The table hereunder gives the production of honey and beeswax for the latest available five years :—

HONEY AND BEESWAX PRODUCTION, 1919-20 TO 1923-24.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Fed. Cap. Ter.	Australia.
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HONEY.

	lb.	lb.	lb.	lb.	lb.	lb.	lb.	lb.
1919-20	472,020	1,396,704	305,586	552,976	336,206	80,468	320	3,144,280
1920-21	1,441,617	1,724,942	426,662	1,821,811	149,226	85,125	1,760	5,651,143
1921-22	2,986,574	2,712,675	598,357	791,324	196,440	82,920	2,500	7,370,790
1922-23	1,235,905	2,285,000	580,057	1,863,026	330,869	71,030	3,175	6,369,062
1923-24	590,800	2,110,713	505,346	721,640	395,047	133,330	180	4,457,056

BEESWAX.

	lb.	lb.	lb.	lb.	lb.	lb.	lb.	lb.
1919-20	12,195	24,735	7,215	7,350	6,611	2,329	..	60,435
1920-21	23,234	24,222	7,501	17,501	3,849	1,788	86	78,181
1921-22	28,255	32,737	8,231	9,108	3,980	1,976	130	84,417
1922-23	28,244	27,182	8,895	19,111	5,391	1,473	198	90,494
1923-24	12,701	25,371	7,405	11,216	5,637	1,596	2	63,928

The quantity of honey and beeswax produced naturally varies from year to year according to the conditions of the seasons. During the last five years New South Wales has produced 6,726,916 lb. of honey and 104,629 lb. of beeswax, while the Victorian figures amounted to 10,230,034 lb. and 134,247 lb. respectively for honey and beeswax. These two States together accounted for 62½ per cent. of the total production of honey, and 63.3 per cent. of the beeswax. Next in order of importance were South Australia, Queensland, and Western Australia.

3. **Oversea Trade in Bee Products.**—In normal years the local production of honey exceeds Australian requirements, and a fair quantity is available for export. During the past five years the value of the exports amounted to only £33,369, or an annual average of £6,674, owing to the decrease in production. Australian honey exhibited at the Franco-British Exhibition in London in 1908 obtained the highest award. The more general use of frame hives has affected the production of wax, and as a result the quantity imported has exceeded that exported during each of the past five years.

BEE PRODUCTS.—IMPORTS, EXPORTS, ETC., AUSTRALIA, 1919-20 TO 1923-24.

Particulars.		1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
HONEY.						
Imports ..	lb.	1,093	201,548	13,572	811	772
" ..	£	35	5,838	399	24	22
Exports ..	lb.	588,384	97,541	94,471	57,638	41,584
" ..	£	18,815	5,328	4,448	2,718	2,060
Net Exports ..	lb.	587,291	- 104,007	80,899	56,827	40,812
" ..	£	18,780	- 510	4,049	2,694	2,038
BEESWAX.						
Imports ..	lb.	26,149	28,235	223,441	238,368	76,478
" ..	£	1,969	2,452	12,786	13,817	4,759
Exports ..	lb.	15,853	7,535	2,259	671	2,046
" ..	£	1,467	810	154	61	149
Net Exports ..	lb.	- 10,296	- 20,700	- 221,182	- 237,697	- 74,432
" ..	£	- 502	- 1,642	- 12,632	- 13,756	- 4,610

NOTE.—The minus sign — signifies net imports.

§ 7. Value of Farmyard, Dairy, and Bee Products.

The value of the farmyard, dairy and bee products raised in Australia in 1923 was as follows:—

FARMYARD, DAIRY, AND BEE PRODUCTS.—VALUE, 1923.

Products.	N.S.W.(a)	Victoria. (a)	Q'land.	S. Aust. (a)	W. Aust.	Tas. (a)	N.T.	Fed. Cap. Ter. (a)	Australia.
	£	£	£	£	£	£	£	£	£
Milk, consumed as									
such ..	2,628,440	2,324,530	566,342	400,305	311,635	311,180	..	2,913	6,545,345
Butter ..	5,712,571	6,491,842	3,373,807	1,326,139	249,538	447,383	..	1,374	17,602,654
Cheese ..	268,430	253,925	343,500	144,382	171	51,169	..	..	1,061,577
Condensed and concentrated milk	c 289,367	d 1,509,406	e 284,691						2,083,464
Bacon and ham ..	983,451	1,676,208	803,186	310,171	142,528	124,608	..	404	4,040,556
Pork ..	386,530	473,071	207,393	155,263	132,615	115,021	..	251	1,470,144
Lard ..	22,931	89,559	36,825	9,396	9,306	6,320	..	9	174,346
Livestock							429	160	1,373
Poultry and eggs	2,443,160	4,587,560	364,681	1,088,105	252,527	300,000	..	(b)	9,036,033
Honey and wax	12,972	50,270	9,585	11,965	8,019	3,440	..	4	96,255
Total ..	12,747,852	17,456,371	5,990,010	3,445,726	1,106,339	1,359,905	429	5,115	42,111,747

(a) Year ended 30th June year following. (b) Included with New South Wales. (c) Includes other Milk Products made. (d) Includes casein, £82,557, and milk sugar, £24,440. (e) Includes coffee and milk, £3,462; cocoa and milk, £254; chocolate and milk, £65; cremonne, £6,927; and Other Products, £2,018.

§ 8. Exports of Australian Farmyard, Dairy and Bee Products.

The quantities and values of Australian farmyard, dairy, and bee products exported during each of the last five years are shown below :—

AUSTRALIAN FARMYARD, DAIRY AND BEE PRODUCTS.—EXPORTS, 1919-20 TO 1923-24.

Products.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
QUANTITY.					
Beeswax lb.	14,438	5,838	830	581	1,909
Butter "	39,006,304	92,420,995	127,347,428	78,975,387	65,440,852
Cheese "	7,516,412	9,530,221	12,670,782	5,454,415	3,787,714
Egg albumen and yolk (a)	(a)	(a)	(a)	(a)	(a)
Eggs doz.	210,784	413,477	807,359	1,236,033	655,215
Feathers, undressed (a)	(a)	(a)	(a)	(a)	(a)
Honey lb.	588,384	97,541	94,471	57,638	41,584
Lard "	7,931,014	3,118,105	2,908,595	1,357,372	645,930
Meats—					
Bacon and ham "	3,040,933	3,113,488	2,712,911	1,871,414	1,548,670
Frozen poultry pair	13,346	22,376	50,367	34,390	10,882
Frozen pork lb.	371,297	163,303	152,584	137,046	53,142
Milk, concentrated and preserved "	35,548,082	37,281,554	36,678,109	21,135,137	17,762,106
Pigs, living No.	164	166	119	67	38
Poultry, living "	2,477	2,880	2,621	2,858	2,174
VALUE.					
Beeswax £	1,325	628	77	51	137
Butter "	3,301,695	11,007,104	7,968,078	6,082,414	4,874,921
Cheese "	377,398	514,123	438,350	231,898	140,715
Egg albumen and yolk "	48,675	27,055	12,061	32	210
Eggs "	17,434	53,920	75,764	102,946	52,715
Feathers, undressed "	793	1,133	956	1,247	303
Honey "	18,815	5,328	4,448	2,718	2,060
Lard "	374,641	153,084	88,694	38,447	23,809
Meats—					
Bacon and ham "	258,890	323,253	223,065	158,414	132,581
Frozen poultry "	10,760	29,963	50,205	42,951	11,270
Frozen pork "	19,149	9,370	7,414	6,063	2,039
Milk, concentrated and preserved "	1,605,101	2,184,761	2,131,279	1,325,883	1,079,943
Pigs, living "	1,044	1,199	990	510	288
Poultry, living "	2,448	2,731	3,268	2,640	1,649
Total "	6,038,228	14,373,657	11,004,649	7,996,214	6,322,700

(a) Quantity not available.

§ 9. British Imports of Dairy Products.

1. Quantities and Values.—The following table gives the quantities and values of the principal dairy products imported into the United Kingdom during the years 1919 to 1923 :—

DAIRY PRODUCTS.—IMPORTS, UNITED KINGDOM, 1919 TO 1923.

Products.	1919.	1920.	1921.	1922.	1923.
Butter cwt.	1,560,204	1,702,203	3,523,976	4,268,561	5,095,511
" £	19,854,427	24,518,748	42,339,947	37,315,536	44,234,534
Cheese cwt.	2,118,250	2,750,260	2,817,465	2,659,345	2,838,546
" £	15,170,620	20,633,946	17,446,521	12,437,818	15,260,707
Milk—Concentrated and preserved cwt.	3,347,645	2,127,199	2,350,610	2,059,050	2,366,532
" £	17,088,310	13,083,697	11,303,566	6,588,155	6,716,648
Bacon and ham cwt.	10,094,352	5,935,981	6,804,875	7,365,394	9,540,241
" £	89,681,616	53,239,250	51,745,149	44,115,900	46,536,807
Pork (a) cwt.	160,263	485,181	372,055	292,358	475,963
" £	1,075,563	3,443,332	1,863,027	1,102,304	1,898,233

(a) Frozen, chilled, and salted.

2. **Butter.**—(i) *Imports.* Australia has for many years supplied a large proportion of the butter imported into the United Kingdom. The quantity available for shipment thereto in 1923 was, however, not so large as in the previous year, nevertheless it amounted to 532,878 cwt., or about 10½ per cent. of the total importation. The Australian contribution was valued at £4,726,340, and was exceeded only by that shipped from Denmark and New Zealand.

BUTTER IMPORTS.—UNITED KINGDOM, 1923.

Country from which Imported.	Quantity.	Value.	Country from which Imported.	Quantity.	Value.
	Cwt.	£		Cwt.	£
Denmark ..	1,837,941	16,757,198	Canada ..	39,834	346,446
New Zealand ..	1,130,765	10,205,809	Soviet Republics ..	30,163	237,531
Australia ..	532,878	4,726,340	United States of America ..	10,578	98,797
Argentine Republic ..	491,256	3,948,962	Foreign Countries, n.e.i. ..	14,219	111,279
Irish Free State ..	492,354	3,751,095	British Possessions, n.e.i. ..	5,350	36,678
Netherlands ..	174,493	1,375,635			
Finland ..	116,076	1,009,292			
Latvia ..	86,013	660,512			
France ..	94,389	591,170			
Sweden ..	39,202	377,790	Total ..	5,095,511	44,234,534

(ii) *London Prices.* The average price of the best quality Australian butter in London during the past ten years is shown in the following table:—

AUSTRALIAN BUTTER.—LONDON PRICES, 1914 TO 1924.

Year.	Average Top Price per Cwt.	Year.	Average Top Price per Cwt.
	s. d.		s. d.
1914	119 0	1920	(b) 299 9
1915	144 6	1921	234 0
1916	169 6	1922	183 0
1917	(a) 206 0	1923	184 6
1918	(b) 252 0	1924	189 6
1919	(b) 252 0		

(a) Proclaimed price.

(b) Flat rate for all imported butter.

Under contract the British Government purchased the surplus output of Australian butter during the period from 1st July 1918, to 31st July, 1920. The price paid was 175s. per cwt. for butter scoring 90 points, a shilling per cwt. being added or deducted as the grading score exceeded or fell below that standard. On the 1st August, 1920, the contract was extended for a further period, the price of butter having been increased to 240s. per cwt., subsequently raised to 272s., and the grading price being likewise increased to 1s. 6d. per cwt. This contract terminated on the 31st March, 1921, butter thenceforward being sold in open market.

3. **Cheese.**—The value of cheese imported into the United Kingdom in 1923 was £15,260,707, of which over £7½ million worth was received from New Zealand, and £5½ million worth from Canada. Small experimental shipments from Australia were made in 1908 and following years, fair prices being realized. The value of the imports from Australia has increased from £24,568 in 1913 to £246,568 in 1923,

4. **Bacon and Ham.**—Of a total import of bacon and ham valued in 1923 at £46,536,807, the United Kingdom received imports to the value of £19,638,597 from Denmark, £19,253,285 from the United States, and £4,389,860 from Canada. The import from Australia was small, experimental shipments only having been made during recent years.

5. **Pork.**—The value of the United Kingdom imports of pork (frozen and salted only) was £1,898,233 in 1923. There was no importation from Australia, the bulk of the supplies being forwarded from the United States, Argentine Republic and Denmark.

6. **Other Products.**—There was practically no shipment to the United Kingdom from Australia of beeswax, poultry, game, lard, or honey, but frozen rabbits to the value of £451,761, and eggs to the value of £101,887 were received from Australia in 1923.

CHAPTER XIX.

FORESTRY.

§ 1. Forestry.

1. *General.*—Economic forestry aims at the preservation and development of existing forest areas by safeguarding against fire and other destructive agencies, by expert supervision of the removal of timber, by judicious thinning, and by re-afforestation of denuded areas with suitable new growths of local or exotic origin. It provides also for the continuance of an indispensable form of national wealth by the afforestation of available bare lands adapted to the growth of various timbers. Though large areas of virgin forests still remain in Australia, the inroads made by timber-getters, by agriculturists, and by pastoralists—who have destroyed large areas by “ring-barking”—are considerable, and it is not unlikely that climatological changes are caused thereby. It is stated that beneficial consequences follow on the planting of trees on denuded lands, or along eroding coasts, and that a forest-covering beneficially regulates the effects of rainfall.

Successful planting of exotics in various parts of Australia has demonstrated that the climate is suitable for the cultivation of a large number of the most valuable and beautiful of the world's timber trees.

2. *Extent of Forests.*—(i) *Australia.* Scientific surveys of the forests of the various States have not yet been completed, and there are, in consequence, conflicting reports regarding the total forest area of Australia. Expert foresters, however, estimate the true forest area at approximately 24,500,000 acres, distributed throughout the States as follows:—

ESTIMATED FOREST AREA—AUSTRALIA, 1923-24.

State.						Total Forest Area.	Percentage on Total Area.
						Acres.	%
New South Wales	..	..	..	..	..	8,000,000	4.04
Victoria	..	..	..	..	..	5,500,000	9.78
Queensland	..	..	..	..	..	6,000,000	1.40
South Australia	..	..	..	..	..	500,000	0.21
Western Australia	..	..	..	..	..	3,000,000	0.48
Tasmania	..	..	..	..	..	1,500,000	8.94
Total	..	..	..	..	..	24,500,000	1.29

(ii) *Comparison with other Countries.* The absolute and relative forest areas of Australia and other countries are shown below :—

FOREST LANDS.—RELATIVE AREAS, VARIOUS COUNTRIES.

Country.	Total Wooded Area.	Percentage on Total Area.	Country.	Total Wooded Area.	Percentage on Total Area.
	Sq. Miles.	%		Sq. Miles.	%
United States ..	733,594	24.24	France ..	38,172	17.95
Russia (Europe) ..	601,852	36.31	Poland ..	32,781	21.99
Canada (a) ..	390,625	10.47	Norway ..	27,434	21.95
India (British) ..	250,949	22.96	Rumania ..	26,436	21.62
Argentine Republic	162,623	14.10	Spain ..	18,965	9.74
French Indo-China	96,523	37.58	Italy ..	18,088	16.35
Sweden ..	91,666	52.98	Czecho-Slovakia ..	17,996	33.17
Japan ..	71,923	27.53	New Zealand ..	17,969	17.30
Germany ..	50,608	26.29	Austria ..	11,795	38.34
Finland ..	48,988	32.75	United Kingdom	4,662	3.83
Australia ..	38,281	1.29			

(a) In addition, the pulpwood forests of Canada are estimated at 541,791 sq. miles.

3. *Distribution.*—The characteristics of the forest areas are given in some detail or each State in Official Year Book No. 6, pp. 446-9. The more conspicuous timber regions of Australia as a whole are the eastern and southern portions, including Tasmania, and the south-western portion northwards and eastwards from Cape Leeuwin. In regard to distribution, on the eastern side of the continent the largest timber is found on the crests and coastal slopes of the mountain ranges, but in the south-west, in addition to the vegetation between mountains and sea, a large area of forest stretches inland from the coastal ranges. The hills encircling Adelaide and Yorke and Eyre Peninsulas also bear good forest. The Kimberley district is timbered, and in the Northern Territory and round the shores of the Gulf of Carpentaria there are considerable forest areas. In the coastal regions of parts of West and North-West Australia, and along the shores of the Great Australian Bight and Encounter Bay, there is little forest. The areas in the centre of the continent are thinly timbered.

Special articles relating to Australian Eucalyptus timbers and the chemical products of Eucalypts will be found in Official Year Book No. 10, pp. 85-98.

§ 2. Forestry Departments.

1. *Functions.*—Each State has organized a separate Department or Commission specially charged with the control and management of the State forests and timber reserves. Extensive survey work is carried on with a view to the classification of forest lands and the proclamation of State forests. The forests are improved by systematic cutting and scientific treatment, by judicious thinning and ringbarking, by the making of roads and the establishment of fire-breaks, and by the removal and destruction of debris, and stunted, diseased or suppressed growth. Provision is made for effective patrols in forest districts to check the ravages caused by fire, often due, it is believed, to carelessness. The training of forest officers, the conduct of research work, and the collection of forestry statistics are also undertaken.

2. *Forest Reservations.*—At the Interstate Conference on Forestry, held at Hobart in 1920, the forestry authorities of the various States estimated that to meet the future

requirements of Australia an area of 24,500,000 acres of indigenous forest lands would be necessary, this estimate being based on the following distribution among the States :—

	Acres.		Acres.
New South Wales	8,000,000	Western Australia	3,000,000
Victoria	5,500,000	Tasmania	1,500,000
Queensland	6,000,000	Total	24,500,000
South Australia	500,000		

Having been endorsed by the Premiers' Conference held later in the same year, this area was adopted as the Australian forest ration towards which the authorities are now aiming for permanent reservation. The progress made in the various States to the end of June, 1924, is set out in the following table :—

AREA OF FOREST RESERVATIONS, 30th JUNE, 1924.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
Dedicated State forests ..	5,221,415	3,500,000	1,536,003	206,109	54,099	31,259	10,548,885
Timber reserves ..	1,659,987	749,000	3,215,202	..	863,426	1,695,985	8,183,600
Total ..	6,881,402	4,249,000	4,751,205	206,109	917,525	1,727,244	18,732,485

(a) Includes area of Timber reserves.

The area of State forests reserved in perpetuity amounted in June, 1924, to 10,548,885 acres, or 43.06 per cent. of the quota adopted for Australia, while the timber reserves, which may be cancelled at any time, embraced an area of 8,183,600 acres, making a total area of 18,732,485 acres under the control of the Forestry Departments. Of this area a considerable proportion consists of inaccessible mountainous country and cut-over lands, while the Australian quota recommended refers to merchantable forest only. The foresters of Australia are, therefore, faced with a difficult task in improving and preserving the existing forests, and in securing the reservation of further suitable forest country to ensure a permanent supply of accessible timber.

3. Sylvicultural Nurseries and Plantations.—Recognition of the necessity for systematic sylviculture has led to the creation in all of the States of a number of sylvicultural nurseries and plantations. The locality of these establishments, together with a brief statement of the nature of their activities, is given in previous issues of the Year Book. (Reference may be made to Official Year Book No. 6, pp. 451-3.) Details regarding forest plantations and employment are given hereunder :—

SYLVICULTURAL PLANTATIONS AND FORESTRY EMPLOYMENT, 1923-24.

Particulars.	New South Wales.	Victoria.	Q'land.	South Australia.	Western Australia.	Tasmania.	Total.
Total area of Effective Plantations—							
Softwoods .. Acres	7,180	8,550	601	10,380	1,250	40	28,001
Hardwoods .. Acres	..	2,160	1,027	5,751	..	..	8,938
Number of persons employed in Forestry Departments—							
Office Staff .. No.	30	35	53	8	36	2	164
Field Staff .. No.	234	121	212	143	196	11	917

4. Revenue and Expenditure.—The revenue and expenditure of the State Forestry Departments from 1919-20 to 1923-24 are given below :—

FORESTRY DEPARTMENTS.—REVENUE AND EXPENDITURE, 1919-20 TO 1923-24.

State.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
REVENUE.					
	£	£	£	£	£
New South Wales	147,041	190,742	217,841	168,698	186,393
Victoria	67,298	95,517	155,160	163,076	166,556
Queensland	100,584	145,802	220,950	267,816	227,830
South Australia	22,003	23,872	11,234	8,362	11,110
Western Australia	45,278	58,617	88,529	87,658	127,253
Tasmania	7,340	20,444	18,891	19,346	21,150
Total	389,544	534,994	712,605	714,956	740,292
EXPENDITURE.					
	£	£	£	£	£
New South Wales	134,997	179,540	186,588	137,108	137,705
Victoria	64,213	71,386	130,076	138,714	160,373
Queensland	35,158	72,718	201,865	158,618	66,670
South Australia	26,404	33,924	36,467	40,822	40,487
Western Australia	15,331	27,632	47,885	38,827	48,333
Tasmania	1,433	2,621	7,069	8,293	8,277
Total	277,536	387,821	609,950	522,382	461,845

5. Instruction in Scientific Forestry.—Forestry schools have been established in several of the States, in which general scientific instruction is imparted, special attention being paid to forestry. In the classes, theoretical forestry, botany, geology, physics, land surveying, etc., are taught; while in outside work trainees receive practical instruction in the preparation of seed-beds, seed-sowing, propagation, planting out, pruning, the general care and improvement of plantations and natural forests, and the employment of timber to the best advantage. Courses of lectures are also given at various centres, and, at some of the higher technical schools, members of the forest staffs are afforded opportunities of qualifying in special subjects. Methods of training, etc., are not uniform in the various States, and one of the prime objects of a Conference held in 1916 was the evolution of a system which, while aiming at uniformity, would be sufficiently elastic to provide for special needs in any State. A site for a forestry school was chosen, a curriculum was drawn up, and complete unanimity was arrived at regarding the higher training to be given at the institution, but matters were allowed to remain in abeyance. Early in 1925, however, the Commonwealth Government decided to establish a National Forestry School at Canberra, and the co-operation of the States is being sought in the planning of the necessary details.

6. Forest Congresses.—Interstate Conferences on Forestry were held in 1911 and 1912, chiefly with a view of securing uniformity of management. An International Forest Congress was held at Paris in June, 1913, when a Professor of South Kensington Imperial College represented the Commonwealth Government. The papers and reports dealt chiefly with the threatened shortage of timber, and the measures necessary to avert the danger. An Imperial Forestry Conference was held in London in the summer of 1920, at which also Australia was represented. Important Interstate Forestry Conferences were held in Adelaide in May, 1916; at Perth in November, 1917; at Hobart in April, 1920; at Brisbane in April, 1922, and at Sydney in September, 1924.

§ 3. Production.

1. **Timber.**—Estimates of the quantity and value of local timber sawn and hewn in each State are given hereunder :—

LOCAL TIMBER SAWN AND HEWN, 1919-20 TO 1923-24.

State.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
	1,000 sup. feet.	1,000 sup. feet.	1,000 sup. feet.	1,000 sup. feet.	1,000 sup. feet.
New South Wales ..	155,114	156,112	143,593	147,108	167,493
Victoria ..	99,142	113,215	112,008	118,336	134,639
Queensland (a) ..	144,389	136,005	112,987	126,088	141,672
South Australia ..	6,178	5,598	3,398	1,187	1,350
Western Australia (a) ..	121,685	131,271	163,991	149,158	161,749
Tasmania (a) ..	54,291	59,047	54,518	45,564	63,120
Total ..	580,799	601,248	590,495	587,441	670,023

(a) Year ended 31st December.

2. **Other Forest Products.**—(i) *Eucalyptus Oil*. Oil may be distilled from the foliage of all varieties of eucalyptus, and several of them furnish a product widely known for its commercial and medicinal uses. Complete information regarding Australian production and consumption of eucalyptus oil is not available, but large quantities are manufactured, particularly in Victoria. Oversea exports amounted in 1921-22 to £24,000, in 1922-23 to £33,990, and in 1923-24 to £66,339, the bulk of the product being shipped from Victoria to the United Kingdom and the United States.

(ii) *Tan Barks*. The forests of Australia contain a wealth of tanning materials, all the eucalypts being capable of furnishing a percentage of tannin. For many years tan bark has been obtained in Australia from the golden, and the black or green wattle, but this source of supply has been largely depleted by the gradual destruction of the trees, and the bark is now imported from Natal where the plantations were originally started from Australian seed. In addition to the wattle bark, a valuable tan bark is obtained from the mallet (*E. occidentalis*) of Western Australia. Its exploitation has, however, been so rapid that the available supply is now comparatively small. An investigation of the resources in tanning materials of Western Australia recently completed by the Institute of Science and Industry proved that barks of common trees such as karri, gimlet and ridge-gum, formerly regarded as waste materials, are rich in tannin and excellent tanning agents. Investigations in the other States would probably reveal additional sources of supply. In Western Australia, moreover, there are extensive areas of red-gum which exudes considerable quantities of a kino (gum) possessing a very high percentage of tannin. This material has not been very largely used, however, owing to the red colour it imparts to the leather, but this disadvantage has been overcome by the Institute of Science and Industry, which has applied for a patent covering the preparation of the tan solution from raw kino. The production of tan bark in Australia is estimated at about 30,000 tons per annum.

3. **Value of Production.**—Though the valuation of the quantity of firewood consumed in Australia presents serious difficulty, an estimate of the total value of forest production is annually compiled with the following results for the past five years :—

VALUE OF FOREST PRODUCTION.—AUSTRALIA, 1919-20 TO 1923-24.

Production.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
	£	£	£	£	£
Total ..	8,631,000	8,877,000	8,998,000	9,344,000	10,292,000

§ 4. Commercial Uses of Principal Australian Timbers.

1. *General.*—The uses of the more important Australian timbers are many and various, and are indicated in previous issues of this work. (See Official Year Book No. 6, pp. 454–6; and Official Year Book No. 10, Section III., § 7 and 8.)

The Commonwealth Government utilizes Australian woods for rifle stocks, telephone switch boards, aeroplane parts, etc. Queensland maple (*Flindersia chatawaiana*) is largely used for rifle stocks, and coachwood is available for the same purpose. Australian timber is also seasoned and stored, depots having been established by the Commonwealth Government at Canberra and Newington in New South Wales, and at Maribyrnong in Victoria; by State Governments at the principal centres; and by private enterprise as required.

2. *Lack of Uniformity in Nomenclature.*—Unfortunately the vernacular names applied to the gums, ironbarks, etc., in the various States, and even in different parts of the same State, do not always refer to identical timbers. The resulting confusion has not only been productive of loss, but it has, to some extent, prejudicially affected the timber trade. This subject is referred to at some length in the special article "Australian Eucalyptus Timbers," in Section III., § 7 and 8, in Official Year Book No. 10. At the 1916 Forestry Conference alluded to above, the matter came up for special consideration, and steps were taken to establish a uniform nomenclature.

§ 5. Oversea Trade.

1. *Imports.*—(i) *Dressed Timber.* The quantity and value of timber imports into Australia during the four years 1920–21 to 1923–24 inclusive are shown according to countries of origin in the following tables:—

DRESSED TIMBER.—IMPORTS, AUSTRALIA, 1920–21 TO 1923–24.

Country of Origin.	Quantity.				Value.			
	1920–21.	1921–22.	1922–23.	1923–24.	1920–21.	1921–22.	1922–23.	1923–24.
	sup. ft.	sup. ft.	sup. ft.	sup. ft.	£	£	£	£
United Kingdom	4,750	230	625	3,443	34	21	33	659
Canada	2,285,721	1,761,394	4,119,889	5,112,662	36,750	15,218	44,113	59,456
India	19,530	200	..	..	3,055	1	..	..
Other British Countries	200	3,982	2,995	17,998	1	54	124	568
Norway	34,241,593	13,794,952	49,971,566	38,671,271	808,562	242,092	724,507	528,346
Sweden	12,883,503	9,094,863	30,299,618	46,363,406	325,864	120,127	421,307	633,704
United States	1,712,904	2,508,918	7,196,660	8,040,984	34,599	34,189	63,998	94,492
Other Foreign Countries	6,059	67,307	497,096	48,032	421	1,998	6,468	1,168
Total	51,154,260	27,231,846	92,088,449	97,657,796	1,209,286	413,700	1,260,550	1,318,393

The figures in the table above are exclusive of items such as architraves, veneers, etc., quantities for which are either not shown, or are expressed in dissimilar units in the Customs entries. The total value of the items so excluded amounted to £123,489 in 1923–24, including plywood, veneered or otherwise, £92,781.

The bulk of the imports of dressed timber comes from Norway, Sweden, and the United States. Practically the whole of this timber consists of softwoods—deal and pine—used for lining, weatherboards, flooring, shelving, doors, box-making, etc.

(ii) *Undressed Timber.* Australian imports of undressed timber for the latest available four years are given hereunder:—

UNDRESSED TIMBER, INCLUDING LOGS (b).—IMPORTS, AUSTRALIA, 1920-21 TO 1923-24.

Country of Origin.	Quantity.				Value.			
	1920-21.	1921-22.	1922-23.	1923-24.	1920-21.	1921-22.	1922-23.	1923-24.
	sup. ft.	sup. ft.	sup. ft.	sup. ft.	£	£	£	£
United Kingdom	205,546	7,179	23,736	25,226	4,929	259	1,216	1,482
Canada ..	12,361,386	17,679,952	43,543,208	62,976,045	181,072	174,878	314,978	475,450
India ..	639,964	24,382	62,009	97,869	62,094	482	769	2,693
Malaya (British)	400,625	226,145	237,433	257,560	5,890	1,944	2,057	1,944
New Zealand ..	61,545,649	49,038,544	42,822,742	42,843,088	879,960	660,824	533,962	510,165
Other British Countries ..	1,234,127	1,854,686	1,699,662	971,622	10,452	13,852	14,471	9,803
Japan ..	5,727,148	3,943,538	6,116,548	5,082,326	210,152	86,686	130,550	113,196
Java ..	a 1,925,464	a 1,051,820	a 884,416	a 577,930	a 23,337	a 6,753	a 8,097	a 8,058
Norway ..	117,142	339,135	416,729	1,724,176	2,390	14,290	5,761	27,207
Sweden ..	2,114,819	816,902	3,220,682	6,914,823	52,507	10,669	44,012	96,407
United States ..	104,083,707	98,849,251	169,636,426	226,360,751	2,048,517	998,259	1,665,312	2,762,302
Other Foreign Countries ..	2,097,200	2,668,107	3,871,076	6,147,964	37,845	40,962	69,751	67,349
Total ..	192,457,777	176,499,691	272,535,558	343,979,380	3,524,145	2,009,858	2,790,936	4,076,056

(a) Including other Dutch East Indian possessions.

super. feet.

(b) Exclusive of timber not measured in

By far the larger proportion of the undressed timber imports consists of softwoods such as yellow pine, redwood, and oregon from the United States of America and Canada; kauri, rimu, and white pine from New Zealand; pine from Japan, and (prior to the war) red deals from Russia, Norway, and Sweden. Amongst the hardwoods imported, the principal are oak from the United States of America and Japan, and teak from India.

2. *Exports.*—The quantity and value of undressed timber exported from 1919-20 to 1923-24 are given below, the countries of destination being also shown:—

UNDRESSED TIMBER, INCLUDING LOGS (a).—EXPORTS, AUSTRALIA, 1919-20 TO 1923-24.

Country to which Exported.	Quantity.					Value.				
	1919-20	1920-21	1921-22	1922-23	1923-24	1919-20	1920-21	1921-22	1922-23	1923-24
	sup. ft.	sup. ft.	sup. ft.	sup. ft.	sup. ft.	£	£	£	£	£
United Kingdom	1,000	1,000	1,000	1,000	1,000	£	£	£	£	£
Canada ..	375	18,078	8,824	5,731	14,154	4,617	181,451	116,017	75,556	143,443
Ceylon ..	59	32	136	41	198	1,405	912	3,030	866	2,915
Egypt ..	1,567	340	6,203	1,898	3,222	10,448	3,316	61,759	19,392	30,773
Hong Kong ..	2,171	6,890	402	(b)	(b)	14,472	55,800	4,696	(b)	(b)
India ..	272	395	462	334	2,969	4,954	6,580	3,883	8,883	125,865
Malaya (British)	467	10,220	9,161	2,672	12,588	3,500	88,650	91,358	28,468	125,865
Mauritius ..	458	1,834	3,706	2,367	2,835	2,342	22,014	50,591	24,546	29,849
New Zealand ..	12,431	25,354	23,874	24,845	36,349	170,730	459,597	358,960	324,052	610,035
Pacific Islands—										
Fiji ..	742	1,011	845	664	1,130	11,224	17,238	12,604	10,307	17,407
Territory of New Guinea	226	158	95	157	213	4,254	4,254	2,401	2,883	4,572
Other Islands	665	896	586	474	535	13,763	20,684	12,597	8,339	10,558
Papua ..	140	189	99	217	316	3,155	10,990	2,391	3,811	5,347
South African Union ..	32,434	34,935	37,261	42,370	24,681	234,657	353,424	395,026	472,564	273,713
Belgium ..	1	2,597	1,766	595	716	27	24,897	18,790	5,949	7,157
China ..	760	3,420	1,939	3,149	3,695	5,996	39,682	19,796	27,418	36,951
Egypt ..	355	625	128	(c) 1,981	5,341	6,921	8,380	2,478	(c) 19,963	55,666
Japan ..				173	116				2,169	2,100
Pacific Islands—										
New Caledonia	155	55	51	32	57	3,081	1,600	1,234	538	1,034
Other Islands	85	140	62	63	87	1,689	3,648	1,426	1,329	1,658
U.S. of America	275	668	489	439	399	6,588	17,466	12,550	11,196	9,318
Other Foreign Countries ..	5	380	303	122	276	43	6,126	4,417	1,865	3,587
Total ..	53,643	108,217	96,394	88,500	106,908	502,881	1,325,083	1,178,725	1,050,142	1,271,948

(a) Exclusive of timber not measured in super. feet.

(b) Now recorded as a Foreign Country.

(c) Previously recorded as a British Country.

As the table shows, the bulk of the exports of undressed timber was consigned to South Africa, New Zealand, and the United Kingdom, and consisted of Australian hardwoods, which have earned an excellent reputation for such purposes as railway sleepers, harbour works, wood paving, etc. There was a notable increase in the quantity supplied to the United States of America in the later war years.

3. Classification of Imports and Exports.—(i) *General*. The quantities of timber classified according to varieties imported and exported during the year 1923-24 are given in the next table :—

TIMBER, VARIETIES IMPORTED AND EXPORTED.—QUANTITIES, AUSTRALIA, 1923-24.

Description.	Unit of Quantity.	Imports.	Exports.	Excess of Imports over Exports.
Dressed	sup. ft.	97,657,796	1,520,164	96,137,632
Undressed, including logs	"	343,979,380	106,907,957	237,071,423
Architraves, mouldings, etc.	lin. ft.	225	221,300	— 221,075
Plywood, veneered or otherwise	sq. ft.	4,794,538	(b)	(b)
Palings	No.	..	291,058	— 291,058
Pickets	"	69,383	20,000	49,383
Shingles	"	3,286,709	6,400	3,280,309
Staves—				
Dressed, etc.	"	9,052	6,656	2,396
Undressed	"	531,975	2,811	529,164
Laths—				
For blinds	"	(a)	(a)	(a)
Other	"	45,148,208	10,000	45,138,208
Doors	"	25,563	(a)	(a)
Wood pulp	ton.	7,471	(b)	(b)
Veneers	—	(a)	(b)	(b)
Spokes, rims, felloes, etc.	—	(a)	(a)	(a)
Other	—	(a)	(a)	(a)

(a) Quantity not available.

(b) Exports not recorded separately.

NOTE.—The minus sign — denotes an excess of exports.

Similar particulars relative to the values of imports and exports during the year 1923-24 are shown hereunder :—

TIMBER, VARIETIES IMPORTED AND EXPORTED.—VALUES, AUSTRALIA, 1923-24.

Description.	Imports.	Exports.	Excess of Imports over Exports.
	£	£	£
Dressed	1,318,393	24,453	1,293,940
Undressed, including logs	4,076,056	1,271,948	2,804,108
Architraves, mouldings, etc.	4	1,436	— 1,432
Plywood, veneered or otherwise	92,781	(b)	(b) 92,781
Palings .. .. .	..	3,600	— 3,600
Pickets	665	146	519
Shingles	8,550	27	8,523
Staves—			
Dressed, etc.	1,197	466	731
Undressed	12,122	119	12,003
Laths—			
For blinds	28	321	— 293
Other	91,249	10	91,239
Doors	22,793	599	22,194
Wood pulp	128,108	(b)	(b) 128,108
Veneers	16,574	(b)	(b) 16,574
Spokes, rims, felloes, etc.	14,404	9,239	5,165
Other	3,359	..	3,359
Total	5,786,283	1,312,364	4,473,919

NOTE.—The minus sign — denotes an excess of exports.

(b) Exports not recorded separately.

(ii) *Sandalwood*. A considerable amount of sandalwood is annually exported, principally from Western Australia to China, where it is highly prized, and largely used for artistic and ceremonial purposes. Particulars for the past five years are as follows :—

SANDALWOOD.—EXPORTS, AUSTRALIA, 1919-20 TO 1923-24.

Country to which Exported.	Quantity.					Value.				
	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
	ton.	ton.	ton.	ton.	ton.	£	£	£	£	£
United Kingdom..	20	1	4	..	..	385	110	267	2	..
Hong Kong ..	9,363	6,495	8,334	4,657	8,894	174,659	111,730	57,714	66,460	222,300
India ..	98	424	333	469	239	1,860	7,736	6,144	8,131	6,192
Malaya (British) ..	4,081	1,793	228	352	1,404	71,522	35,191	3,935	5,322	45,118
Other British Countries ..	..	..	2	2	..	..	..	36	30	..
China ..	1,300	2,419	575	2,419	3,754	18,307	39,798	7,611	30,876	88,415
Other Foreign Countries ..	..	..	..	..	..	..	..	..	..	..
	35	7	6	..	..	626	136	128	3	..
Total ..	14,897	11,139	4,482	7,899	14,291	267,359	194,701	75,830	110,824	357,025

(iii) *Tan Bark*. Tan bark figures both as an export and import in the Australian trade returns, as the following tables show. The first table refers to exports :—

TAN BARK.—EXPORTS, AUSTRALIA, 1919-20 TO 1923-24.

Country to which Exported.	Quantity.					Value.				
	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
	cwt.	cwt.	cwt.	cwt.	cwt.	£	£	£	£	£
United Kingdom..	3,700	360	1	12	..	2,561	202	1	3	..
New Zealand ..	60,900	56,360	17,047	12,718	5,278	37,616	39,356	11,927	8,299	3,268
Other British Possessions ..	..	100	..	309	..	..	88	..	194	..
Foreign Countries	7,780	8,400	822	4,490	12,323	4,050	7,084	534	2,220	7,155
Total ..	72,380	65,220	17,870	17,529	17,601	44,227	46,730	12,462	10,716	10,418

(a) Includes Germany, 9,905 cwt., value £4,983.

Prior to the war there was a fairly considerable export of tan bark to Germany and also to Belgium. The exports westward naturally dwindled away during the war years, and New Zealand received the largest share of the available export, while there was also some trade with Japan, China, and Java. In the year 1923-4, Germany again appears as a customer, the export returns showing that 9,005 cwt., valued at £4,983, were shipped thereto.

A comparison of the imports and exports of tan bark during the last five years is given in the next table :—

TAN BARK.—IMPORTS AND EXPORTS, AUSTRALIA, 1919-20 TO 1923-24.

Particulars.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
	cwt.	cwt.	cwt.	cwt.	cwt.
QUANTITIES—					
Imports	78,800	48,100	34,328	93,769	73,941
Exports	72,380	65,220	17,870	17,529	17,601
Excess of exports over imports ..	— 6,420	17,120	— 16,458	— 76,240	— 56,340
VALUES—	£	£	£	£	£
Imports	33,733	20,002	15,954	37,349	28,672
Exports	44,227	46,730	12,462	10,716	10,418
Excess of exports over imports ..	10,494	26,728	— 3,492	— 26,633	— 18,254

NOTE.—The minus sign — denotes excess of imports.

The imports consist almost exclusively of wattle bark from the plantations in South Africa. One variety of Australian wattle is found to flourish in the sandy belts near the coast, but it is the *Acacia decurrens*, var. *mollis*, which is chiefly relied upon for the production of wattle bark in the South African plantations. Seed has been tried from New South Wales, Tasmania, and Victoria, but it is stated that most of the seed is obtained from the best wattle bark areas in eastern Tasmania and western Victoria.

Two reasons are given to account for the success of the industry in South Africa. (a) It is found that the treeless, grassy highlands of Natal are specially suitable for wattle culture, and the trees can therefore be grown in rows and economically attended to, while the necessary bark sheds and other appurtenances can be placed in the most advantageous positions. (b) There is an abundance of cheap and efficient Hindu labour available for employment on the plantations.

CHAPTER XX.

FISHERIES.*

§ 1. General.

1. **Fish Stocks.**—Australia possesses an abundant and varied fish fauna, which embraces both tropical and temperate varieties and includes destructive as well as valuable species. In rivers and lakes both indigenous and imported varieties thrive. The latter have been introduced and acclimatized for industrial and sporting purposes by Governments and angling societies. Exploitation of the fishing areas—for some classes of fish for the whole year, for others during the breeding season only, or until a certain size is attained—is, where necessary, forbidden; proclaimed localities are closed against net-fishing, and a minimum size of mesh for nets is fixed. The sea-fishermen in some districts have made regulations in their own interests for the purpose of controlling the market supply.

2. **Progress of Industry.**—(i) *Transport and Marketing.* Despite the abundance of edible fish, the progress of the fishery industry in Australia has been slow, and transport and marketing of the proved supplies have not been satisfactorily dealt with.

In New South Wales, as shown in § 5 herein and § 6 of this Chapter in Official Year Book No. 17, the matter of exploiting trawlable fish was undertaken by the State Government, which also took steps to improve the conditions under which ordinary coastal fishing is carried on. In Queensland, State trawling was undertaken in 1919, and good trawling areas have been located and charted between Cape Moreton and Caloundra.

(ii) *Economic Investigations.* Although valuable work has been done by the State Governments in the way of experiment and culture, a uniform policy of development for Australia is desirable, and recommendations have been made that the Fisheries Departments of the various States should co-operate with the Federal Government with a view to increasing the productiveness of Australian waters, and bringing about uniformity in fisheries laws. All live fish imported into Australia are examined on shipboard in order to prevent the importation of undesirable fish. With the object of ascertaining the movements of oceanic fishes, and of estuarine fishes which make periodical oceanic migrations, reports are furnished regarding the various kinds of fishes, etc., and their movements along the coast. Details regarding the activities of the States in fish-culture were given in Official Year Book No. 6, pp. 471–2. By arrangement with the Commonwealth Fisheries Department some years ago members of the staff of the Australian Museum, Sydney, accompanied the F.I.S. *Endeavour* on various cruises. Specimens were collected, mounted for scientific purposes, and distributed to other Australian Museums, a considerable number being put aside for the Commonwealth Fishery Museum. As pointed out in § 4, however, this vessel was lost with all hands in 1914, and has not since been replaced.

3. **Consumption of Fish.**—It has been said that the Australians are not an “ichthyophagous” race, seeing that the annual consumption of fish per head of population in Great Britain is set down at 42 lbs., while in Australia it has been estimated at only 13 lbs. The heavy imports of dried and preserved fish indicate, however, that there is scope for the development of the industry, which now seems to be ill-managed, the price to the consumer being high, while the fisherman’s gain is uncertain, and the system of distribution lacks method.

* A specially contributed article dealing with the Marine and Fresh Water Fisheries of Australia appeared as § 6 of this Chapter in Official Year Book No. 17 (*vide* pp. 752 to 767 therein).

4. **Oyster Fisheries.**—Natural oyster beds exist on the foreshores in the shallow waters of inlets and estuaries in several parts of Australia. By husbanding the natural crop, and by judicious transplanting, the output has been very materially augmented. The areas are leased by the Government to private persons, lengths of foreshore being taken up under oyster leases. In New South Wales and Queensland the industry has thriven, and small yields are obtained in South Australia, Victoria, and Tasmania.

5. **Pearl-shell, Pearls, Bêche-de-Mer, etc.**—(i) *General.* Pearl-shelling is carried on in the tropical waters of Queensland, the Northern Territory, and Western Australia. The pearl-oyster inhabits the northern and western coastal waters from Cape York to Shark Bay, a length of shore of over 2,000 miles. The shells are marketed in considerable quantities, and pearls also are obtained in Queensland, Western Australia and the Northern Territory. The fishing is generally conducted with the aid of diving apparatus, in water varying from 4 to 20 fathoms in depth. In Queensland and the Northern Territory the bêche-de-mer industry is carried on, and tortoise-shell is obtained on the coasts. Experiments have been made in cultivating the pearl-oyster on suitable banks. In October, 1911, a pearl weighing 178 grains, and valued at £3,000, was obtained at Broome. Further details regarding pearl-shelling are given in Official Year Book No. 6, p. 463. Trochus-shell to the value of £10,008 and £13,600 was raised in Queensland during 1922 and 1923 respectively.

(ii) *Royal Commission on Pearl-shelling Industry.* In accordance with the "White Australia" policy it was originally determined that the employment of Asiatic labour in the pearl-shelling industry should be restricted, and ultimately cease, and it was proposed that after 31st December, 1913, permits to bring in Asiatics for the pearling-fleet should no longer be issued. In view, however, of the disorganization of the industry occasioned by the war, the time was extended to the 30th June, 1918, after which date permits to introduce Asiatic labour were to be granted only in cases where the diver and tender of a boat were Europeans. The Royal Commission appointed in March, 1912, presented its final report in 1916. The Commissioners stated that, though it might be practicable, they did not consider it advisable or profitable to attempt to transfer the industry from Asiatics to Europeans. They further stated that, while the labour now employed is almost entirely Asiatic, they did not consider that the "White Australia" policy would be weakened or imperilled by allowing the industry to continue as at present conducted.

§ 2. The Fishery Industry.

1. **Boats and Men Engaged, and Take.**—(i) *General Fisheries.* The returns have been compiled from particulars supplied by the State Departments, and while the data do not generally lend themselves to presentation on a uniform basis, the principal facts have been incorporated in the tables hereunder:—

GENERAL FISHERIES, 1923.

State or Territory.	No. of Boats Engaged.	Value of Boats and Equip- ment.	No. of Men Em- ployed.	Total Take of—		Value of Take.	
				Fish.	Spiny Lobster (Crayfish).	Fish.	Spiny Lobster (Crayfish).
	No.	£	No.	cwt.	doz.	£	£
New South Wales	1,080	96,598	f 2,905	6157,518	6,654	6507,461	c 33,418
Victoria (e) ..	812	101,921	1,234	80,007	17,385	145,554	15,101
Queensland ..	669	39,837	1,249	48,610	..	101,162	g 2,220
South Australia ..	800	48,000	1,110	(a)	(a)	(a)	(a)
Western Australia	258	34,089	533	26,111	7,126	73,111	3,563
Tasmania (d) ..	145	20,350	391	doz. 55,484	8,860	14,512	5,560
Northern Territory	2	(a)	(a)	957	..	3,554	..
Total (d) ..	3,766	340,795	7,422	..	40,025	845,354	59,862

(a) Not available. (b) Including 6,084 cwt. fish, valued at £12,777, obtained by State trawlers, (c) Including £21,602, the value of 2,860 cwt. prawns and 3,800 dozen crabs. (d) Incomplete (e) Year ended 30th June, 1924. (f) Number of licensed fishermen. (g) Crabs.

Returns for the past five years are given in the table below :—

GENERAL FISHERIES.—AUSTRALIA, 1919 TO 1923.

Particulars.	1919.	1920.	1921.	1922.	1923.
No. of boats engaged	3,838	3,624	3,684	3,873	3,776
No. of men employed	7,774	7,634	7,846	7,771	7,422
Fish obtained—					
Quantity cwt.	a387,680	a397,250	a377,614	a350,350	a319,148
Value £	a629,120	a689,568	a708,670	a793,263	a845,354
Lobsters obtained—Value	£ a26,896	a44,885	a43,329	a54,796	a59,862

(a) Exclusive of South Australia.

(ii) *Edible Oyster Fisheries.* The returns from oyster fisheries are given in the next table.

EDIBLE OYSTER FISHERIES (a), 1923.

State or Territory.	Number of Boats Engaged.	Value of Boats and Equip-ment.	Number of Men Em-ployed.	Number of Leases.	Oysters Taken.	
					Quantity.	Value.
	No.	£	No.	No.	cwt.	£
New South Wales	562	22,682	566	4,265	48,698	83,910
Victoria (b)	35	4,688	76	12	1,136	1,516
Queensland	97	10,050	126	645	27,023	37,448
South Australia (c) .. ..	..	..	..	..	..	..
Tasmania	4	600	19	..	380,000 (doz.)	d 4,943
Total	698	38,020	787	4,922	..	127,817

(a) Practically no oyster fisheries in Western Australia and Northern Territory. (b) Year ended 30th June, 1924. (c) Included with General Fisheries. (d) Including £4,183, value of scallops.

Returns for Australia for the last five years are given in the appended table :—

EDIBLE OYSTER FISHERIES.—(c) AUSTRALIA, 1919 TO 1923.

Particulars.	1919.	1920.	1921.	1922.(a)	1923.(a)
No. of boats engaged	(b) 503	(b) 532	(b) 591	624	694
No. of men employed	(b) 492	(b) 539	(b) 602	667	763
Oysters obtained—					
Quantity cwt.	78,430	72,767	63,804	68,516	76,857
Value £	100,910	108,694	96,808	110,305	122,874

(a) Exclusive of Tasmania.

(b) Exclusive of Victoria.

(c) Exclusive of South Australia.

(iii) *Pearl and Bêche-de-Mer Fisheries.* The pearling industry is carried on in the tropical waters of Queensland, Western Australia, and the Northern Territory Bêche-de-mer is obtained in Queensland and the Northern Territory, the product being exported to China. Particulars for the year 1923 are as follows :—

PEARL, PEARL-SHELL, AND BÊCHE-DE-MER FISHERIES, (a), 1923.

State or Territory.	Number of Boats Engaged.	Value of Boats and Equipment.	Number of Men Employed.	Quantity of Pearl-shell obtained.	Value of Pearl-shell obtained.	Value of Pearls obtained.	Value of Bêche-de-mer obtained.	Value of Tortoise-shell obtained.
	No.	£	No.	Tons.	£	£	£	£
Queensland (b) ..	153	70,000	1,304	847	103,640	(c)	33,370	578
Western Australia ..	233	115,571	1,701	1,433	183,549	60,717	..	..
Northern Territory ..	2	(c)	(c)	12	1,500	(c)	..	..
Australia ..	388	185,571	3,005	2,292	288,689	60,717	33,370	578

(a) No pearl-shelling industry in New South Wales, Victoria, South Australia, and Tasmania.

(b) Also trochus-shell to the value of £13,600.

(c) Not available.

For obvious reasons the returns in regard to the value of pearls obtained can be regarded as rough approximations only. The trochus-shell raised in Queensland is used principally in the manufacture of "pearl" buttons.

Particulars regarding these fisheries for the last five years are given below:—

PEARL, PEARL-SHELL, AND BÊCHE-DE-MER FISHERIES.—AUSTRALIA.
1919 TO 1923.

Particulars.	1919.	1920.	1921.	1922.	1923.
No. of boats engaged ..	471	515	334	356	388
No. of men employed ..	3,453	3,738	2,403	2,639	3,005
Pearl-shell obtained—					
Quantity .. tons	2,300	2,126	1,422	2,271	2,292
Value .. £	387,034	337,917	189,276	303,452	288,689
Pearls obtained (a)—					
Value .. £	74,212	68,610	36,163	38,163	60,717
Bêche-de-mer obtained —					
Quantity .. tons	308	(b)	(b)	(b)	(b)
Value .. £	42,721	70,898	52,201	65,679	33,370
Tortoise-shell obtained—					
Quantity .. lbs.	172	552	2,112	992	896
Value .. £	96	302	1,080	663	578
Trochus-shell obtained—					
Value .. £	30,280	41,698	7,383	10,008	13,600

(a) Incomplete; but as returned.

(b) Not returned.

2. Fish Preserving.—To encourage the industry, the Federal Parliament provided a bounty of $\frac{1}{2}$ d. per lb. for fish preserved as prescribed during the ten years 1907–8 to 1916–17. The payment, which amounted to only £3,005 during the period, or at the rate of £300 per annum, failed to develop the industry, and the bounty was not renewed on its expiration in 1916–17.

3. State Revenue from Fisheries.—The revenue from fisheries in each State during the year 1923 is given hereunder:—

FISHERIES.—REVENUE, 1923.

State or Territory.	Licences.	Leases.	Fines and Forfeitures.	Other Sources.	Total.
	£	£	£	£	£
New South Wales ..	1,303	8,842	289	2,697	13,131
Victoria (a) ..	483	42	190	15	730
Queensland ..	2,517	3,282	96	12	5,907
South Australia ..	983	..	..	..	983
Western Australia ..	3,989	1,252	235	386	5,862
Tasmania ..	719	1	219	60	999
Northern Territory ..	19	..	..	..	19
Total ..	10,013	13,419	1,029	3,170	27,631

(a) Year ended 30th June, 1921.

Similar particulars for Australia for the last five years are given in the following table :—

FISHERIES.—REVENUE, AUSTRALIA, 1919 TO 1923.

Particulars.	1919.	1920.	1921.	1922.	1923.
	£	£	£	£	£
Licences	10,959	11,760	9,164	9,092	10,013
Leases	11,969	13,432	13,106	14,181	13,419
Fines and Forfeitures ..	523	536	472	663	1,029
Other Sources	3,919	524	586	1,076	3,170
Total	27,370	26,252	23,328	25,012	27,631

§ 3. Oversea Trade in Fishery Products.

1. **Imports of Fish.**—The development of the local fishing industry leaves much to be desired, as is evident from the large imports. For the last five years the imports were as follows :—

FISH.—IMPORTS, AUSTRALIA, 1919–20 TO 1923–24.

Classification.		1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
Fresh (oysters) ..	cwt.	520	2,092	2,297	2,927	415
	£	762	2,708	3,675	4,091	301
Fresh, or preserved by cold process	cwt.	9,444	17,558	25,130	38,508	50,718
	£	39,796	81,126	107,999	127,172	165,948
Potted	cwt.	(a)	(a)	(a)	(a)	(a)
	£	97,340	64,310	72,788	69,422	101,085
Preserved in tins	cwt.	148,684	103,505	163,034	175,322	233,318
	£	989,742	649,610	885,781	867,708	1,158,048
Smoked, dried, and n.e.i.	cwt.	6,106	10,179	13,170	13,633	15,592
	£	38,298	52,774	59,038	56,190	63,167
Total	cwt. (b)	164,754	133,334	203,631	230,390	300,043
	£	1,165,938	850,528	1,129,281	1,124,583	1,488,549

(a) Not available.

(b) Exclusive of potted fish.

Tinned fish constitutes by far the largest proportion of the imports, most of it consisting of salmon from the United States of America, Canada, Norway, and Alaska. The potted fish comes chiefly from the United Kingdom. New Zealand supplies the largest proportion of the fresh fish, the bulk of the remainder coming from the United Kingdom and South African Union. The small import of oysters is supplied by New Zealand.

2. **Exports of Fish.**—The exports of local fish produce for the five years 1919–20 to 1923–24 are given hereunder :—

FISH (AUSTRALIAN PRODUCE).—EXPORTS, 1919–20 TO 1923–24.

Classification.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
Fish, fresh, smoked, or preserved by cold process	{ cwt. 790 £ 6,017	10,193 86,474	9,865 89,095	9,692 66,104	5,681 33,259
Preserved, in tins, dried, salted, etc.	{ cwt. 9,259 £ 66,255	102 195	78 306	162 433	476 1,185
Total ..	{ cwt. 10,049 £ 72,272	10,295 86,669	9,943 89,401	9,854 66,537	6,157 34,444

The quantity of fresh fish exported from Australia is trifling, and the amount of £33,259 shown in the table above consists chiefly of cured bêche-de-mer exported to Hong Kong from Queensland.

3. Exports of Pearl and Other Shell.—The exports of pearl, tortoise, and trochus-shell, of Australian origin, are given hereunder for the five years 1919-20 to 1923-24 :—

PEARL, TORTOISE, AND TROCHUS-SHELL.—EXPORTS, AUSTRALIA,
1919-20 TO 1923-24.

Article.		1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
Pearl-shell	cwt.	45,040	31,480	38,900	41,027	48,017
	£	462,152	319,143	317,623	320,602	377,313
Tortoise-shell	lbs.	1,542	2,922	1,938	2,812	3,308
	£	1,011	1,864	1,243	2,012	2,574
Trochus-shell	cwt.	26,000	11,900	14,320	13,186	12,072
	£	105,894	37,602	26,285	25,095	23,142

The bulk of the pearl-shell exported during 1923-24 was consigned to the United States of America and the United Kingdom, the respective values of the shipments amounting to £301,199 and £65,127, while trochus-shell to the value of £19,684 was dispatched to Japan.

§ 4. The Commonwealth Department of Fisheries.

In 1907 the Commonwealth Government decided to demonstrate what might be attained commercially by the application of modern methods in fishery. A Federal Investigation Ship, the *Endeavour*, was constructed specially for the work, and a Director of Fisheries was appointed. Experimental cruises were undertaken, which showed that Australia possesses an asset of considerable value in her sea fisheries. The *Endeavour* was unfortunately lost at sea with all on board at the end of 1914, and has not been replaced. A description of the trawling grounds discovered, data regarding oceanography to the east of Australia, and a list of the publications of the Department are given in pp. 333 to 335 of Year Book No. 14.

§ 5. The State Trawling Industry—New South Wales.

The State Trawling Industry was established in 1915, and fishing operations were conducted with seven steel steam trawlers. The catches were landed at Sydney and Newcastle, and the fish distributed through retail shops, of which there were fourteen in the Metropolitan area, one in Newcastle, and five in country towns. During the year ended 30th June, 1922, the State trawlers landed 2,413 tons of fish, valued at £101,337. Early in the year 1923 the Government decided to discontinue trawling operations, as the venture was not a commercial success, the accumulated net loss amounting to £210,518, and the assets have since been disposed of.

CHAPTER XXI.

MINERAL INDUSTRY.

§ 1. The Mineral Wealth of Australia.

1. *Place of Mining in Australian Development.*—The value of production from the mineral industry is now considerably less than that returned by the agricultural or the pastoral industry, nevertheless it was the discovery of gold in payable quantities that first attracted population to Australia, and thus laid the foundation of its nationhood. Prior to 1851, the year when Hargraves' memorable discovery was made, coal and copper had both been mined to some extent, and the existence of deposits of other minerals, including gold, had been proved. But it was the news of the sensational finds of the precious metal in 1851 and the year immediately following that brought about a constant stream of immigration, and caused an increase in population from 221,000 at the end of 1841 to upwards of 1,168,000 at the end of 1861.

2. *Extent of Mineral Wealth.*—The extent of the total mineral wealth of Australia cannot yet be regarded as completely ascertained, as large areas of country still await systematic prospecting. The presence of considerable deposits of valuable minerals has long been known. Thus, coal was discovered in 1797, and a shipload was exported to Bengal in 1799, silver was discovered by Count Strezlecki as early as 1839, and was worked as early as 1864; copper mining dates back to 1844; lead to about 1848; iron to about 1850; while the discovery of gold in payable quantities dates back to 1851. Cobalt, nickel, manganese, chromium, tungsten, molybdenum, mercury, antimony, bismuth, zinc, radio-active ores, etc., have all been found, some in fairly large quantities.

Among the more valuable non-metalliferous substances may be mentioned coke, kerosene shale, graphite, alunite, asbestos, diatomaceous earth, phosphate, clays, ochres, etc.; in building stones—sandstones, syenites, granites, basalts, augite-andesite, porphyries, serpentines, slates, limestones, and marbles; in precious stones—diamonds, emeralds, rubies, sapphires, amethysts, precious opal, turquoise, topazes, garnets, chrysolites, cairngorm, agates, etc.

3. *Quantity and Value of Production during 1923.*—The quantities (where available) and the values of the principal minerals produced in each State, and in Australia as a whole during the year 1923, are given in the tables immediately following. It must be clearly understood that the figures quoted in these tables refer to the quantities and values of the various minerals in the form in which they were reported to the States Mines Departments, and represent amounts which the Mines Departments consider may fairly be taken as accruing to the mineral industry as such. They are not to be regarded as representative of Australia's potentiality as a producer of *metals*, this matter being dealt with separately in § 18 hereinafter. It may be explained, therefore, that the item pig-iron in New South Wales refers only to metal produced from locally-raised ore and so reported to the Mines Department. New South Wales is, of course, in normal times, a large producer of iron and steel from ironstone mined in South Australia. As the table shows, the latter State receives credit for this ironstone in its mineral returns, but the iron and steel produced therefrom cannot be apportioned to the mineral industry of New South Wales. Similarly lead, silver-lead, and zinc are credited in the form reported to the State of origin—chiefly New South Wales—although the actual metal extraction is carried out to a large extent elsewhere.

MINERAL PRODUCTION.—QUANTITIES, 1923.

Minerals.	Unit.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T. (a)	Australia.
Alunite ..	ton	998	..	..	..	..	..	..	998
Antimony ..	..	..	822	..	..	..	..	..	822
Arsenic ..	..	11,493	..	610	..	Not stated	..	..	12,103
Asbestos ..	..	294	..	..	7	115	..	..	326
Barytes ..	..	100	..	..	1,761	..	..	..	1,861
Bismuth ..	cwt.	120	..	5	..	..	..	..	125
Brown coal ..	ton	..	116,888	..	..	..	..	..	116,888
Chromite ..	..	1,192	..	..	..	..	..	..	1,192
Coal ..	..	10,478,513	476,823	1,060,662	..	420,714	80,718	..	12,517,430
Cobalt ..	..	..	..	218	..	..	..	..	218
Copper (ingot, matte, etc.) ..	..	1,182	..	6,243	3,523	1,057	6,065	..	18,070
Copper ore ..	..	79	..	..	..	3,394	..	4	3,477
Diatomaceous earth ..	..	515	..	..	..	..	..	..	515
Gold ..	fineoz.	18,833	95,403	88,726	949	504,511	3,684	168	712,274
Gypsum ..	ton	2,070	12,761	..	53,405	..	..	..	68,236
Iron (pig) (c) ..	..	94,350	..	..	..	..	..	..	94,350
Iron oxide ..	..	2,716	..	..	..	..	..	..	2,716
Ironstone ..	..	..	..	200	384,434	2	..	..	384,636
Kaolin ..	..	3,632	2,307	..	..	..	..	..	5,939
Lead ..	..	..	..	5,487	..	20	4,784	..	10,291
Lead and silver ore, concentrates, etc. ..	..	241,761	..	..	2	3,172	..	..	244,935
Limestone flux ..	..	131,843	..	95,158	94,020	..	100,113	..	421,134
Magnesite ..	..	6,130	75	..	165	2	..	..	6,372
Manganese ore ..	..	2,556	..	74	168	22	..	..	2,820
Molybdenite ..	cwt.	190	1,000	191	..	..	..	1	1,382
Osmiridium ..	oz.	..	..	..	..	..	673	..	673
Phosphate ..	ton	74	480	..	446	..	..	..	1,000
Pigments ..	..	190	123	..	52	..	..	..	365
Platinum ..	oz.	586	..	..	..	..	..	..	586
Pyritic ore ..	ton	..	..	..	..	..	11,882	..	11,882
Salt ..	..	..	(b)	..	50,286	..	..	..	50,286
Sapphires ..	oz.	1,034	..	Not stated	..	..	..	..	1,034
Shale (oil) ..	ton	1,207	..	..	..	..	1,101	..	2,308
Silver ..	fineoz.	107,682	6,304	469,302	43	109,005	638,602	..	1,330,938
Tin and tin ore ..	ton	896	78	903	..	131	1,160	136	3,304
Wolfram ..	..	2	..	..	..	..	97	1	100
Zinc ores and con- centrates ..	..	426,049	..	..	..	..	..	..	426,049

(a) Year ended 30th June, 1922. (b) Not available for publication. (c) See letterpress preceding this table.

The comparative value of the minerals raised in each State during 1923 is given in the following table:—

MINERAL PRODUCTION.—VALUE, 1923.

Minerals.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T. (b)	Australia.
Alunite ..	£ 3,992	£ ..	£ ..	£ ..	£ ..	£ ..	£ ..	£ 3,992
Antimony ..	..	14,112	..	..	..	..	..	14,112
Arsenic ..	28,178	..	27,780	..	686	..	..	56,044
Asbestos ..	4,267	..	..	161	4,032	..	..	8,460
Barytes ..	200	..	..	5,265	..	..	..	5,465
Bismuth ..	1,640	..	100	..	..	..	..	1,740
Brown coal ..	..	38,019	..	..	..	..	..	38,019
Chromite ..	3,082	..	..	..	..	..	..	3,082
Coal ..	8,607,892	525,270	925,227	..	368,949	70,797	..	10,498,135
Cobalt ..	..	..	43,449	..	..	..	..	43,449
Copper (ingot and matte) ..	81,203	..	430,746	232,172	16,193	435,413	..	1,195,727
Copper ore ..	1,172	..	..	..	48,907	..	30	50,109
Diamonds ..	230	..	..	..	..	..	..	230
Diatomaceous earth ..	1,098	..	..	..	..	..	..	1,098
Gold ..	83,325	422,105	392,563	4,199	2,232,179	16,300	743	3,151,414
Gypsum ..	360	10,176	..	46,729	..	..	..	57,265
Iron (pig) (c) ..	707,625	..	..	..	..	..	..	707,625
Iron oxide ..	3,081	..	..	..	..	..	..	3,081
Ironstone ..	..	..	150	445,303	9	..	..	445,462
Kaolin ..	5,158	2,384	..	..	..	..	..	7,542
Lead ..	..	..	147,233	..	609	127,542	..	275,384
Lead and silver- lead ore, concen- trates, etc. ..	2,941,401	5	..	54	43,416	..	..	2,984,871

MINERAL PRODUCTION—VALUE, 1923—*continued.*

Minerals.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T. (b)	Australia.
	£	£	£	£	£	£	£	£
Limestone flux ..	49,441	..	35,741	38,579	..	122,428	..	246,189
Magnetite ..	5,699	225	..	323	8	..	..	6,255
Manganese ore ..	7,748	..	332	1,581	200	..	..	9,861
Molybdenite ..	1,816	6,250	2,069	..	..	..	8	10,143
Opal ..	3,040	..	500	..	..	..	..	3,540
Osmiridium ..	..	..	..	..	..	19,642	..	19,642
Phosphate ..	132	713	..	592	..	..	..	1,437
Pigments ..	351	635	..	155	..	..	..	1,141
Platinum ..	10,204	..	..	..	..	..	..	10,204
Pyritic ore ..	..	..	..	..	..	26,737	..	26,737
Salt ..	..	(a)	..	113,143	..	..	..	113,143
Sapphires ..	3,282	..	23,309	..	..	..	..	26,591
Shale (oil) ..	2,831	..	..	..	..	1,094	..	3,925
Silver ..	15,461	963	69,412	6	16,036	91,339	..	193,217
Tin and tin ore ..	180,789	10,371	114,945	..	15,095	236,955	13,887	572,042
Wolfram ..	64	..	..	..	..	6,150	18	6,232
Zinc concentrates ..	1,411,652	..	..	..	..	..	..	1,411,652
Unenumerated ..	10,274	..	1,942	2,116	782	..	1,926	17,040
Total ..	14,176,688	1,031,223	2,215,498	890,378	2,747,101	1,154,397	16,612	22,231,897

(a) Not available for publication. (b) Year ended 30th June, 1922. (c) See letterpress page 764.

It may be pointed out in connexion with the figures given in the above table that the totals are exclusive of returns relating to certain commodities, such as stone for building and industrial uses, sand, gravel, brick and pottery clays, lime, cement, and slates, which might rightly be included under the generic term "mineral." Valuations of the production of some of these may be obtained from the reports of the various Mines Departments, but in regard to others it is impossible to obtain adequate information. In some instances, moreover, the published information is of little value. By restricting the comparison to items in connexion with which properly comparable information can be obtained for each State, it is believed that a satisfactory estimate of the progress of the mineral industry can be more readily obtained. The items excluded from the total for New South Wales in 1923 consist of—lime, £92,387; marble, £1,510; slate, £90; Portland cement, £1,025,687; coke, £941,323; chert, £1,820; granite, £1,965; shell grit, £580; mineral water, £824; sulphur (obtained from roasting concentrates), £31,880; and brick and pottery clays, £13,415. From the Queensland returns, marble, £964 has been deducted, from South Australia, sulphuric acid, £4,892, while the item carbide, £64,720, has been excluded from the Tasmanian figures.

4. Value of Production, 1919 to 1923.—The value of the mineral production in each State during the five years 1919 to 1923 is given in the table hereunder:—

MINERAL PRODUCTION.—VALUE, 1919 TO 1923.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	Australia.
	£	£	£	£	£	£	£	£
1919 ..	8,911,725	1,151,980	2,575,225	771,659	4,191,973	1,307,692	71,697	18,981,951
1920 ..	9,791,979	1,435,135	3,617,870	1,150,849	4,110,376	1,426,442	80,101	21,612,752
1921 ..	12,052,509	1,218,783	1,495,899	904,659	3,463,764	822,767	19,003	19,977,384
1922 ..	12,951,164	1,244,966	1,859,084	331,866	3,041,112	878,009	9,959	20,316,160
1923 ..	14,176,688	1,031,223	2,215,498	890,378	2,747,101	1,154,397	16,612	22,231,897

For New South Wales the production in 1913 was the highest recorded.

The low value returned in 1919 was due chiefly to cessation of operations for a large portion of the year at the Broken Hill mines, and partly to the dry conditions prevailing over an extensive area of the State. In Queensland the falling-off in 1921 was occasioned by the low prices realised for the principal industrial metals. None of the copper companies in the Cloncurry district resumed operations, and Mount Morgan, which in previous years contributed about 30 per cent. of the State's mineral

yield, closed down early in the year. Increases in the returns from copper, lead, silver, cobalt, and tin mainly accounted for the rise in value of production for 1923. The low returns in South Australia for 1921 were due to the small production of copper, and this was followed by a still smaller yield in 1922, when the value dwindled to £74,000, the least return since 1844. A further factor in the reduction of the total for 1922 was the temporary cessation of operations at the ironstone deposits at Iron Knob, the value of the ore raised being £58,000, as compared with £587,000 in 1921. The improvement in the returns for 1923 was mainly accounted for by increases in the production from ironstone and copper which amounted to £387,000 in the case of ironstone, and £158,000 in the case of copper, over the figures for 1922. In Western Australia the gold yield in 1923 again showed a decline, being upwards of £1,243,000 less than in 1920. High cost of mining requisites, coupled with the depressed market for base metals, account for the restricted output generally. The collapse in the market for industrial metals, in conjunction with the increased cost of production, brought about the fall in production during 1921 in Tasmania. Improvement in the returns for tin, copper, lead, and coal was responsible for the increase in 1923. The stagnation in the base metal industry is reflected in the Northern Territory returns for 1922.

5. Total Production to end of 1923.—In the next table will be found the estimated value of the total mineral production in each State up to the end of 1923. The figures given in the table are also exclusive of the same items referred to in connexion with the preceding table. Thus the total for New South Wales falls short by £18,910,000 of that published by the State Department of Mines, the principal items excluded being coke, £8,199,000; cement, £8,093,000; lime, £929,000; and marble, £46,000.

MINERAL PRODUCTION.—VALUE TO END OF 1923.

Minerals.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor.Ter.(a)	Australia.
	£	£	£	£	£	£	£	Million. £
Gold ..	63,452,856	302,355,058	84,930,396	1,617,380	152,529,446	8,854,227	2,276,460	616
Silver and lead ..	94,871,079	263,083	3,573,719	378,358	1,918,616	7,424,276	62,515	108
Copper ..	15,415,953	216,656	25,059,425	33,015,276	1,746,122	16,875,466	232,538	93
Iron ..	5,109,552	15,641	471,934	3,391,537	36,721	52,110	..	9
Tin ..	12,841,235	925,986	10,115,593	..	1,510,066	15,568,358	539,967	42
Wolfram ..	271,706	11,885	1,061,419	301	1,441	179,467	216,859	2
Zinc ..	16,296,666	..	..	15,993	5,437	36,320	..	16
Coal ..	132,061,846	7,060,770	12,218,689	..	3,881,878	1,207,532	..	156
Other ..	7,174,621	747,780	2,517,368	2,626,812	121,715	770,545	32,542	14
Total	347,495,414	311,596,859	139,948,543	41,045,657	161,701,442	50,968,301	3,360,881	1,056

(a) To 30th June, 1923.

The "other" minerals in New South Wales include alunite, £200,319; antimony, £344,588; bismuth, £226,419; chrome, £117,602; diamonds, £143,714; limestone flux, £997,920; molybdenite, £216,143; opal, £1,529,394; scheelite, £192,375; and oil shale, £2,689,347. In the Victorian returns antimony ore was responsible for £592,133. The value for coal in this State includes £256,172 for brown coal. Included in "other" in the Queensland production were opal, £181,195; gems, £560,797; bismuth, £309,435; molybdenite, £406,737; and limestone flux, £701,058. The chief items in South Australian "other" minerals were salt, £1,608,767; limestone flux, £292,291; gypsum, £283,551; and phosphate, £127,859. In the Tasmanian returns limestone flux was responsible for £214,167, and osmiridium for £297,580, while the figures for recent years include values for iron pyrites.

6. Decline in the Metalliferous Industry.—On the 1st December, 1921, a Select Committee was appointed by the Legislative Assembly of New South Wales to inquire into and report upon the serious decline in the metalliferous industry. The result of the Committee's investigations was published in a Report issued in 1922, wherein the chief contributing causes of the decline in New South Wales and in Australia generally were summarized as follows:—(1) High cost of production. (2) Deterioration in ore values in existing mines. (3) Inadequate machinery. (4) High freights. (5) High treatment charges. (6) Imperfect labour conditions in mines. (7) Lack of new payable discoveries. (8) Lack of efficiently-supported prospecting.

§ 2. Gold.

1. **Discovery in Various States.**—The discovery of gold in payable quantities was an epoch-making event in Australian history, for, as one writer aptly phrases it, this event “precipitated Australia into nationhood.” A more or less detailed account of the finding of gold in the various States appears under this section in Official Year Books Nos. 1 to 4, but considerations of space preclude its repetition in the present issue.

2. **Production at Various Periods.**—In the following table will be found the value of the gold raised in the several States and in Australia as a whole during each of the six decennial periods from 1851 to 1910, and in single years from 1911 to 1923, from the dates when payable discoveries were first reported. Owing to defective information in the earlier years the figures fall considerably short of the actual totals, for during the first stages of mining development, large quantities of gold were taken out of Australia by successful diggers, who preferred to keep the amount of their wealth secret. For South Australia the records in the earlier years are somewhat irregular, and this remark applies to some extent also to the returns for Western Australia and Tasmania.

GOLD.—VALUE OF PRODUCTION, 1851 TO 1923.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Ter.	Australia.
	£	£	£	£	£	£	£	£
1851-60..	11,530,583	93,337,052	14,565	..	..	788,564	..	105,670,764
1861-70..	13,676,103	65,106,264	2,076,494	..	..	12,174	..	80,871,035
1871-80..	8,576,654	40,625,188	10,733,048	579,068	..	700,048	79,022	61,293,028
1881-90..	4,306,541	28,413,792	13,843,081	246,668	178,473	1,514,921	713,345	49,216,821
1891-1900	10,332,120	29,904,152	23,989,359	219,931	22,308,524	2,338,336	906,988	89,999,410
1901-10..	9,569,492	30,136,680	23,412,395	310,080	75,540,415	2,566,170	473,871	142,009,109
1911 ..	769,353	2,140,855	1,640,323	15,000	5,823,075	132,108	30,910	10,551,624
1912 ..	702,129	2,039,464	1,477,979	28,000	5,448,385	161,300	22,671	9,879,928
1913 ..	635,703	1,847,475	1,128,768	27,800	5,581,696	141,876	13,250	9,376,568
1914 ..	528,873	1,755,236	1,059,674	25,581	5,237,350	111,475	10,757	8,729,946
1915 ..	562,819	1,397,793	1,060,703	25,830	5,140,226	78,784	3,781	8,269,936
1916 ..	459,370	1,090,149	913,951	33,000	4,508,529	67,072	3,861	7,075,932
1917 ..	349,038	857,497	761,639	30,334	4,121,642	61,577	3,677	6,185,404
1918 ..	369,743	674,655	567,371	26,252	3,723,180	44,724	2,229	5,408,154
1919 ..	336,240	691,632	618,101	16,465	3,748,882	39,252	4,234	5,454,806
1920 ..	275,109	859,461	648,168	9,546	3,475,386	35,134	5,282	5,308,086
1921 ..	271,302	554,087	214,060	13,933	2,935,693	28,311	1,299	4,018,685
1922 ..	118,359	501,515	378,154	4,693	2,525,811	16,101	540	3,515,173
1923 ..	83,325	422,105	392,563	4,199	2,232,179	16,900	743	3,151,414
Total ..	63,452,856	302,355,058	84,930,396	1,617,380	152,529,446	8,854,227	2,276,460	616,015,823

The value of the gold yield in 1923 was the lowest recorded since the discovery of the precious metal in 1851.

The amount of gold raised in Australia in any one year attained its maximum in 1903, in which year Western Australia also reached its highest point. For the other States the years in which the greatest yields were obtained were as follows:—New South Wales, 1852; Victoria, 1856; Queensland, 1900; South Australia, 1904, and Tasmania, 1899.

The following table shows the quantity in fine ounces of gold raised in each State and in Australia during each of the last five years, the value of one ounce fine being taken at £5 2s. 1½d. in 1919, at £5 12s. 6d. in 1920, at £5 6s. 0½d. in 1921, at £4 13s. 10½d. in 1922, and at £4 8s. 5½d. in 1923.

GOLD.—QUANTITY PRODUCED, 1919 TO 1923.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Nor. Ter.	Australia.
	Fine ozs.	Fine ozs.	Fine ozs.	Fine ozs.	Fine ozs.	Fine ozs.	Fine ozs.	Fine ozs.
1919 ..	65,839	135,428	121,030	3,224	734,066	7,686	(a) 829	1,068,102
1920 ..	48,908	152,792	115,229	1,697	617,843	6,246	(a) 939	943,854
1921 ..	51,173	104,512	40,376	2,628	553,731	5,340	(a) 245	758,005
1922 ..	25,222	106,872	80,584	1,000	538,246	3,431	(a) 115	755,470
1923 ..	18,833	95,403	88,726	949	504,511	3,684	(a) 168	712,274

(a) Year ended 30th June.

Unfortunately the general decline which has characterized Australia's gold output for a number of years has not been checked by any new finds of importance, and, unless economies can be carried out, the fall in price of gold will have a depressing effect on production.

3. **Changes in Relative Positions of States as Gold Producers.**—A glance at the figures in the table showing the value of gold raised will sufficiently explain the enormous increase in the population of Victoria during the period 1851 to 1861, when an average of over 40,000 persons reached the State each year. With the exception of the year 1889, when its output was surpassed by that of Queensland, Victoria maintained its position as the chief gold-producer for a period of forty-seven years, or up to 1898, when its production was outstripped by that of Western Australia, the latter State from this year onward contributing practically half, and so far as recent years are concerned more than half the entire yield of Australia. New South Wales occupied the second place on the list until 1874, when Queensland returns exceeded those of the parent State, and, with the exception of the year 1921, maintained this pre-eminence to the end of 1923. South Australia has occupied the position of lowest contributor to the total gold yield since the year 1871. Taking the average of the last ten years, the relative position of each State in regard to the gold production of Australia was as follows:—

GOLD.—RELATIVE POSITION OF STATES AS PRODUCERS, 1914 TO 1923.

State.	Annual Average of Gold Production, 1914 to 1923.	Percentage on Total.	State.	Annual Average of Gold Production, 1914 to 1923.	Percentage on Total.
	Ozs.			Ozs.	
Total ..	1,263,461	100.0	New South Wales	74,434	5.9
Western Australia ..	829,972	65.7	Tasmania ..	11,199	0.9
Victoria ..	195,465	15.5	South Australia ..	4,293	0.3
Queensland ..	147,316	11.6	Northern Territory	782	0.1

4. **Methods of Gold Mining adopted in Each State.**—(i) *New South Wales.* In New South Wales the earlier "rushes" were to surface alluvial or shallow-sinking grounds. Many of these were apparently soon worked out, but there is reason to believe that in some instances payable results would be obtained by treating the rejected wash-dirt on more scientific principles. With the exhaustion of the surface deposits, discoveries were made by sinking to what are called deep alluvial leads, representing the beds of old drainage channels in Pliocene and Pleistocene times. The first of these deep alluvial leads was discovered at Forbes, in New South Wales, in 1862. The Tertiary deep leads at Gulgong were discovered in 1871. Cretaceous leads occur at Tibbooburra, and detrital gold has been found in permo-carboniferous conglomerates at Tallawang. The method of dredging is extensively used for winning gold from the beds of running streams, and from loose river flats and other wet ground where sinking would be impracticable. The system was introduced from New Zealand, where it was originally applied with great success on the Clutha River, and practically all the auriferous rivers of New South Wales have been worked by dredges. Hydraulic sluicing is employed also in several places, the necessary machinery being fitted to a pontoon for convenience in moving from place to place. The quantity of alluvial gold obtained, other than by dredging, amounted to 1,178 ozs. in 1923, the chief yields being obtained in the Tumut and Adelong District, 280 ozs.; Bathurst, 234 ozs.; Peel and Uralla, 198 ozs.; and Tambaroora and Turon Division, 134 ozs. The quantity obtained by dredging was 8,331 ozs.; the largest returns being obtained at Gundagai (Lachlan) 2,795 ozs.; Adelong (Tumut and Adelong District) 4,708 ozs.; and Araluen (Southern) 1,073 ozs. During 1923, the combined value of the dredging plants in the various areas was £72,048, but only 4 dredges were in operation. The quantity of gold won from quartz amounted to 4,219 ozs. In order of importance the yields in mining districts were—Southern, 1,096 ozs.; Lachlan, 938 ozs.; Bathurst, 710 ozs.; Tambaroora and Turon, 667 ozs.; Mudgee, 212 ozs. From the Cobar District, which for many years was the principal producer, the yield in 1923 was only 77 ozs., as compared with over 3,000 ozs. in 1922.

(ii) *Victoria.* Lode mining predominates in Victoria, although gold is also obtained from alluvial workings, both surface and deep leads. Owing to the exhaustion of much of the payable auriferous area the yield has been on the down grade for the last sixteen years, and the return for 1923 was the lowest experienced since 1851. The deepest mines in Australia are found in the Bendigo district, where there are two shafts 4,614 and 4,318 feet deep respectively. (It may be interesting to note here that the deepest mine in the world is the St. John del Rey in Brazil, where the workings reach a vertical depth of 6,726 feet from the surface. The Village Deep in the Transvaal is 6,263 feet deep, while two shafts on the Kolar goldfield in India reach over 6,000 feet). A considerable amount of attention is given to dredging and hydraulic sluicing, particularly in the Beechworth, Maryborough, Castlemaine, Ararat, Stawell, Gippsland, and Ballarat districts. The yields from alluvial and quartz respectively as returned (in crude ounces) from the chief mining districts of the State during 1923 were as follows:—Ararat and Stawell, 4,647 and 516; Ballarat, 1,007 and 785; Beechworth, 7,871 and 25,067; Bendigo, 361 and 44,896; Castlemaine, 1,763 and 15,751; Gippsland, 1,198 and 469; Maryborough 387 and 477.

The largest output from quartz mining in the Bendigo district was furnished by the New Red, White, and Blue, with 19,068 ozs., valued at £72,672; followed by the Hercules and Energetic, 5,412 ozs., £21,514; Ulster, 1,798 ozs., £7,066; and Lansell's North Red, White, and Blue, 1,440 ozs., £5,760. In the Beechworth district the Morning Star Co., at Wood's Point, returned 17,348 ozs., valued at £59,161; the Rose, Thistle and Shamrock at Harrietville, 3,378 ozs., £13,979; and the A.I. Gold Mines at Gaffney's Creek, 861 ozs., £3,347. In the Daylesford area of the Castlemaine district the Ajax returned 8,070 ozs., £33,123; and Ajax North, 2,586 ozs., £10,350. At Tarrenhower, Oswald's G.M. Co. produced 1,748 ozs., valued at £6,990. The only yield of importance in the Ballarat area was obtained by the Yankee Reef Syndicate at Blackwood, with 819 ozs., valued at £3,276.

From alluvial the principal yield was obtained by Cock's Pioneer Gold and Tin Mines, with 6,261 ozs., valued at £25,044. This Company, which operates in the Beechworth district, also produced about £10,000 worth of tin during the year. The New Langi Logan at Ararat returned 3,068 ozs., valued at £12,239. In the Gippsland area the Tongio Gold Dredging Co. at Omeo obtained 679 ozs., valued at £2,716.

(iii) *Queensland.* Operations in Queensland are chiefly confined to reefing, and to the production of gold in connexion with the smelting of copper and other ores, the yield from alluvial in 1923 being only 455 ozs., of which 289 ozs. were obtained at Batavia River, while the quantity produced from stone treated was 21,262 ozs.; from copper and other ores 64,828 ozs.; and from old tailings 2,181 ozs.; making a total production of 88,726 ozs. The yields from the principal fields were—Mount Morgan, 64,362 ozs.; Charters Towers, 2,787 ozs.; Gympie, 7,437 ozs.; Chillagoe, 1,379 ozs.; Etheridge, 1,650 ozs.; Ravenswood, 3,289 ozs.; and Mount Coolon, 6,139 ozs. Practically three-fourths of the entire production came from Mount Morgan, the yields from Gympie and Charters Towers being much below those of the preceding year. The once famous Charters Towers field is apparently approaching exhaustion.

(iv) *South Australia.* Gold is found in widely-scattered localities in South Australia, but the production has at no period been large. Alluvial gold is produced by the Echunga, Teetulpia, Barossa, and Ulooloo fields. Within recent years the chief source of the metal has been the copper ore of Wallaroo and Moonta, from which it is recovered by smelting and electrolytic refining.

(v) *Western Australia.* The auriferous deposits of Western Australia may be grouped under three headings—(1) superficial deposits, (2) deposits in beds of conglomerate, and (3) lode and vein deposits. The first class includes a number of deposits of alluvial type, either in the beds of existing watercourses or in deep leads, up to 100 feet or more below present surface level. Associated with these are deposits of crystalline gold in "pug," oxide of iron, and soft weathered portions of underlying bed rock. Considerable areas of auriferous surface soil are also found, and these have apparently originated from the denudation by weathering of the bed rock and its associated veins. The shallow surface deposits have been worked by ground sluicing wherever water was available, but most of the ground has been worked by "dry-blowing." The pug and clayey bedrock are usually treated in puddling machines. In regard to (2) it may be noted that in several localities on the Pilbara goldfield and in one on the Yalgoo, gold has been found in conglomerate of the Nullagine series of rocks, now tentatively accepted

as of Cambrian age. The gold is crystalline and is confined to the interstitial cementing material. Occasional occurrences of gold are met with in laterite conglomerate of tertiary and post-tertiary age, and at Kintore in conglomerate of the same age. Lode and vein deposits alluded to in (3) are found in great variety in Western Australia. The gold is always found associated with iron pyrites in the unoxidized portions of the lodes, and often also with copper pyrites, arsenical pyrites and galena. Tellurides of gold occur at times.

The yields from the principal fields in order of importance were as follows:—East Coolgardie, 370,670 ozs.; Murchison, 27,037 ozs.; Mt. Margaret, 26,876 ozs.; Coolgardie, 13,077 ozs.; North Coolgardie, 12,213 ozs.; East Murchison, 11,016 ozs.; Yilgarn, 8,376 ozs.; Yalgoo, 7,713 ozs.; Dundas, 6,538 ozs.; North-East Coolgardie, 4,714 ozs.; Broad Arrow, 2,741 ozs.; Pilbara, 2,544 ozs.; and Peak Hill, 1,700 ozs. Of the total yield of 495,672 ozs. reported to the Mines Department, 490,312 ozs. were obtained from ore treated, 4,162 ozs. from dollied and specimens, while the return from alluvial was about 1,200 ozs. The total referred to differs somewhat from that quoted in the first table in this chapter, which represents gold exported and minted. It may be noted here that the total amount of dividends paid by Western Australian mining companies to the end of the year 1923 was £28,381,000.

Western Australia reached its zenith as a gold-producer in 1903, when the output was valued at £8,771,000, but since then there has been a more or less steady decline until in 1923 the total had dropped to £2,232,000. Three causes may be adduced to account for this falling-off—(1) Exhaustion of known rich deposits. (2) Unwise development, *i.e.*, “picking the eyes” of good mines. (3) Increased cost of stores, equipment and labour, rendering it unprofitable to treat low-grade ores.

(vi) *Tasmania*. The yield in Tasmania is chiefly obtained from reefing, and the returns from the principal districts in 1923 were as follows:—North-West and West Coasts, 2,034 ozs.; Mathinna, 1,001 ozs.; Lisle Golconda, 201 ozs.; Mt. Claude, 160 ozs.; Beaconsfield, 206 ozs.; and smaller quantities from Mt. Cameron, Mt. Victoria, and Warrentinna.

The total production was equal to 3,684 ozs. fine. During 1923 the blister copper produced by the Mt. Lyell Mining and Railway Co. Ltd. contained approximately 1,996 ozs. of gold.

(vii) *Northern Territory*. The production for 1923 amounted to only 207 ozs. It is stated that the potentialities of the older fields have by no means been exhausted, although a revival of the industry depends on the expenditure of large sums of money, either by the Government or by mining speculators, on developmental work. Of the total yield 107 ozs. came from the Golden Dyke mine, 22 ozs. from Watt's Creek, and 45 ozs. from Tanami.

5. *Remarkable Masses of Gold*.—Allusion has already been made in preceding Year Books to the discovery of “nuggets” and other remarkable masses of gold, but it is not proposed to repeat this information in the present issue. (See Year Book No. 4, page 500.)

6. *Modes of Occurrence of Gold in Australia*.—This subject has been alluded to at some length in earlier issues of the Year Book, but considerations of space will not permit of repetition in the present issue.

7. *Place of Australia in the World's Gold Production*.—In the table given below will be found the estimated value of the world's gold production, and the share of Australia therein during the five years 1919 to 1923. The figures given in the table have been compiled chiefly from returns obtained directly by the Commonwealth Bureau of Census and Statistics from the gold-producing countries of the world.

GOLD.—WORLD'S PRODUCTION, 1919 TO 1923.

Year.				World's Production of Gold.	Gold Produced in Australia.	Percentage of Australia on Total.
				£	£	%
1919	..	..	..	88,244,000	5,455,000	6.2
1920	..	..	..	90,730,000	5,308,000	5.9
1921	..	..	..	83,772,000	4,019,000	4.8
1922	..	..	..	71,653,000	3,545,000	4.9
1923	..	..	..	78,367,000	3,151,000	4.0

The value of the gold yield in the ten chief producing countries during each of the five years 1919 to 1923 is given in the table hereunder. Particulars of the quantity and value of the gold production for all countries for the ten years 1914-23 will be found in the Bulletin of Australian Production issued by this Bureau.

GOLD.—PRODUCTION, CHIEF COUNTRIES, 1919 TO 1923.

Country.	1919.	1920.	1921.	1922.	1923.
	£	£	£	£	£
Union of South Africa	42,550,000	45,892,000	43,096,000	32,895,000	40,480,000
United States	14,695,000	13,581,000	12,519,000	10,743,000	10,736,000
Canada	3,916,000	4,303,000	4,911,000	5,929,000	5,457,000
Australia	5,455,000	5,306,000	4,018,000	3,545,000	3,153,000
Mexico	3,873,000	4,154,000	3,626,000	3,512,000	3,437,000
Rhodesia	3,030,000	3,108,000	3,104,000	3,063,000	2,865,000
India	2,304,000	2,609,000	2,073,000	1,832,000	1,697,000
Colombia	1,482,000	1,578,000	1,539,000	1,201,000	1,220,000
Japan	1,309,000	1,499,000	1,408,000	1,239,000	1,154,000
Gold Coast	1,508,000	1,167,000	1,078,000	998,000	883,000

It has been deemed advisable to apportion values in accordance with Australian currency, i.e., at £5 2s. 1½d. for 1919, £5 12s. 6d. for 1920, £5 6s. 0½d. for 1921, £4 13s. 10½d. for 1922, and £4 8s. 5½d. for 1923.

The next table shows the average yearly value in order of importance of the yield in the chief gold-producing countries for the decennium 1914-23 :—

GOLD.—AVERAGE ANNUAL PRODUCTION, CHIEF COUNTRIES, 1914 TO 1923.

Country.	Value.	Country.	Value.
	£		£
Union of South Africa	39,277,000	Mexico	2,906,000
United States	15,143,000	India	2,181,000
Australia	5,715,000	Gold Coast	1,362,000
Canada	4,176,000	Japan	1,280,000
Rhodesia	3,286,000	Colombia	1,220,000
Russia	3,164,000		

The comparison has been restricted to countries where the average for the period is in excess of a million sterling.

8. **Employment in Gold Mining.**—The number of persons engaged in gold mining in each State in 1901 and during each of the last five years is shown in the following table :—

GOLD MINING.—PERSONS EMPLOYED, 1901, AND 1919 TO 1923.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Ter.	Total.
	No.	No.	No.	No.	No.	No.	No.	No.
1901	12,064	27,387	9,438	1,000	19,771	1,112	200	70,972
1919	1,656	3,065	792	100	7,242	73	60	12,988
1920	1,712	3,742	611	100	7,087	48	20	13,320
1921	1,516	3,050	722	100	6,019	67	10	11,484
1922	1,197	3,310	767	40	5,787	106	12	11,219
1923	1,141	2,982	603	32	5,555	119	30	10,462

The heavy decline noticeable since 1901 is of course due to the exhaustion of accessible payable deposits and the failure to locate any considerable fresh sources of supply.

§ 3. Platinum and Platinoid Metals.

1. **Platinum.**—(i) *New South Wales.* The deposits at present worked in the State are situated at Platina in the Fifield division, near Parkes, and the production in 1923 amounted to 586 ozs., valued at £10,204, as compared with 80 ozs., valued at £1,182 in the preceding year, while the total production recorded to the end of 1923 amounted to 16,604, ozs., valued at £79,233. Production was stimulated by the local price for the metal, £19 per oz., and if a permanent water supply were assured the industry could afford a livelihood for a much larger number than the 60 men engaged in it during 1923.

(ii) *Victoria.* In Gippsland the metal has been found in association with copper, and 127 ozs. were produced in 1913, but there was no production in recent years.

(iii) *Queensland.* Platinum associated with osmiridium has been found in the beach sands between Southport and Currumbin, in creeks on the Russell gold-field near Innisfail, and in alluvial deposits on the Gympie gold-field, but no production has been recorded.

2. **Osmium, Iridium, etc.**—(i) *New South Wales.* Small quantities of osmium, iridium, and rhodium are found in various localities. Platinum, associated with iridium and osmium, has been found in the washings from the Aberfoil River, about 15 miles from Oban; on the beach sands of the northern coast; in the gem sand at Bingara, Mudgee, Bathurst, and other places. In some cases, as for example in the beach sands of Ballina, the osmiridium and other platinoid metals amount to as much as 40 per cent. of the platinum, or about 28 per cent. of the whole metallic content.

(ii) *Victoria.* In Victoria, iridosmine has been found near Foster, and at Waratah Range, South Gippsland.

(iii) *Tasmania.* For many years osmiridium has been known to exist in the bed of the Savage River, on the West Coast, and in rivulets and creeks in the serpentine country. The first recorded production was in 1910, when 120 ozs., valued at £530, or £4 8s. 4d. per oz., were raised. In 1914 the yield had increased to 1,019 ozs., valued at £10,076, or nearly £9 18s. per oz. From 1915 to 1917 the amount raised fell off considerably, owing to difficulty in disposing of the metal, but in 1918 there was an increase to 1,607 ozs., valued at £44,833; while in 1920 the 2,009 ozs. produced returned £77,114, or over £38 7s. 8d. per oz. In October of that year as much as £42 per oz. was obtained. For 1921 the production was 1,751 ozs., valued at £42,935, or about £24 10s. per oz. The price obtained in 1921, varied from £35 in January to £27 10s. in April, May, and June, to £23 in July and August, and to £20 from September to the close of the year. For 1922 the output reached 1,174 ozs., valued at £35,512. In 1923 the yield amounted to 673 ozs., valued at £19,642.

§ 4. Silver and Lead.

1. **Occurrence in Each State.**—Particulars regarding the occurrence of silver in each State will be found in preceding Year Books, Nos. 1 to 5, but considerations of space preclude the repetition of this matter in the present volume.

2. **Development of Silver Mining.**—The value of the production of silver, silver-lead and ore, and lead from each State during the five years ending 1923 is given hereunder:—

SILVER AND LEAD.—PRODUCTION, 1919 TO 1923.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Ter.	Australia.
	£	£	£	£	£	£	£	£
1919 ..	1,647,878	1,607	28,511	180	107,508	136,234	(a)132	1,922,050
1920 ..	123,481	1,714	135,559	2,646	190,484	309,035	(a)299	763,218
1921 ..	1,327,364	862	54,188	240	67,521	89,817	..	1,539,992
1922 ..	2,574,108	1,080	109,350	377	87,692	241,694	..	3,014,301
1923 ..	2,956,862	963	216,645	60	60,061	218,881	..	3,453,472

(a) Year ended 30th June.

The heavy falling-off in the production for 1919 and 1920 as compared with previous years was due to the suspension of operations owing to industrial troubles at the principal mines on the Broken Hill field. In addition to causing a cessation of mining operations and treatment of tailings on the Broken Hill field, the smelting works at Cockle Creek, upon which most of the silver-lead mines in other parts of the State depend for the sale of their ores, were forced to close. The resumption of normal production in 1921 by the mines on the Broken Hill field was largely hindered by the low price of lead, and the destruction by fire of the smelting works at Port Pirie.

It must be understood that the totals for New South Wales in the above table represent the *net* value of the product (excluding zinc) of the silver-lead mines of the State. In explanation of the values thus given, it may be noted that the metallic contents of the larger portion of the output from the silver-lead mines in the State are extracted outside New South Wales, and the Mines Department considers, therefore, that the State should not take full credit for the finished product. The real importance of the State as a producer of silver, lead, and zinc is thus to some extent lost sight of. The next table, however, which indicates the quantity of these metals locally produced, and the average contents by assay of concentrates exported during the last five years, will show, as regards New South Wales, the estimated total production and the value accruing to Australia from the three metals:—

SILVER-LEAD MINES.—NEW SOUTH WALES, TOTAL PRODUCTION, 1919 TO 1923.

Year.	Metal Produced within Australia.				Contents of Concentrates Exported.			
	Silver.	Lead.	Zinc.	Value.	Silver.	Lead.	Zinc.	Value.
	ozs. fine.	tons.	tons.	£	ozs. fine.	tons.	tons.	£
1919 ..	5,886,947	80,175	(a) 7,119	4,109,466	417,871	2,425	18,146	253,751
1920 ..	196,111	1,749	(a) 10,565	515,728	479,221	3,025	21,742	274,061
1921 ..	3,624,413	47,426	(a) 1,425	1,723,864	617,477	6,539	19,272	261,238
1922 ..	6,648,825	97,867	23,724	4,113,427	3,264,102	19,328	132,186	1,272,074
1923 ..	7,233,236	124,570	41,153	5,707,739	4,834,718	40,906	149,319	1,813,287

(a) Including Zinc Oxide and Zinc Lead Oxide.

The figures given above are quoted on the authority of the Mines Department of New South Wales.

3. Sources of Production.—Broken Hill, in New South Wales, is the great centre of silver production in Australia.

(i) *New South Wales.* (a) *Broken Hill.* A description of the silver-bearing area in this district is given in earlier issues of the Year Book. During 1913 the output of ore from the mines in this division amounted to 1,744,000 tons, the highest recorded in the history of the field, but owing to the dislocation caused by the war the quantity raised in 1914 decreased to 1,442,000 tons. For the four years 1915 to 1918 the ore raised averaged over 1,200,000 tons, but, owing to the cessation of operations through industrial troubles and the fall in the price of metals the production in 1919 dwindled to 415,400 tons, and in 1920, when operations were carried on for a few weeks only, to 38,661 tons. In 1921 the output rose to 317,333 tons, in 1922 to 640,064 tons, and in 1923 to 378,537 tons, of which 861,853 tons were sulphide and 16,634 tons oxidized ore.

Although the returns are not complete in all cases, the following table relating to the companies controlling the principal mines at Broken Hill will give some idea of the richness of the field:—

SILVER.—BROKEN HILL RETURNS TO END OF 1923.

Mine.	Value of Output to end of 1923.	Dividends and Bonuses Paid to end of 1923.
	£	£
Broken Hill Proprietary Co. Ltd. ..	49,893,733	12,456,550
Broken Hill Proprietary Block 14 Co. Ltd. ..	3,957,148	632,160
British Australian Broken Hill Co. Ltd. ..	5,858,998	821,280
Broken Hill Proprietary Block 10 Co. Ltd. ..	4,946,989	1,432,500
Sulphide Corporation Ltd. (Central Mine) ..	22,543,588	2,926,875
Broken Hill South Ltd. ..	13,257,847	2,935,000
North Broken Hill Ltd. ..	7,895,584	2,288,940
Broken Hill Junction Lead Mining Co. ..	1,185,058	87,500
Junction North Broken Hill Mine ..	2,687,774	160,814
The Zinc Corporation Ltd. ..	3,442,466	10,000
Barrier South Ltd. ..	151,517	50,000
Totals ..	115,820,702	23,801,619

The returns relating to dividends and bonuses paid are exclusive of £1,744,000 representing the nominal value of shares in Block 14, British, and Block 10 companies, allotted to shareholders of Broken Hill Proprietary Company. If the output of the companies engaged in treating the tailings, etc., be taken into consideration, the totals for output and dividends shown in the table would be increased to about 123 millions and 28 millions respectively. The authorized capital of the various companies amounted to £8,148,000.

(b) *Picton Division.* The mines in the Yerranderie area produced 5,151 tons of ore in 1923, yielding 575,491 ozs. of silver, besides 928 ozs. of gold and 1,662 tons of lead, the total production being valued at £123,917, the highest yet recorded. Of the total production in 1923, 3,500 tons valued at £84,000 were raised by the Silver Peaks Mines. Parts of one of the stopes in this mine showed over 10 feet of solid galena, yielding 120 ozs. of silver, and 33 per cent. of lead per ton. Ore to the value of £35,000 also was raised by the Colon Peaks Mining Co. in this area.

(c) *Yass Division.* During 1923 the Kangiara mine produced 125 tons of ore yielding 3,325 ozs. of silver, 45 tons of lead, and 13 ozs. of gold. About 470 ozs. of silver, and 8 ozs. of gold were also obtained from copper ores.

(d) *Other Areas.* Small quantities of silver, lead, gold, and copper were produced during the year in the Condobolin, Tingha, Tumbarumba, and Wilson's Downfall Divisions.

(ii) *Victoria.* The silver produced in 1923 amounted to 6,304 ozs., valued at £963, and was obtained in the refining of gold at the Melbourne Mint.

(iii) *Queensland.* The yields from the chief silver and lead producing centres in 1923 were as follows :—Chillagoe, silver £56,308, lead £135,093 ; Herberton, silver £3,689, lead £2,606 ; Brisbane, silver £2,574, lead £3,566 ; Mt. Morgan, silver £2,389 ; Etheridge, silver £1,229, lead £3,293. Some of the mining leases in the Chillagoe area are owned by the State. The Mount Isa silver-lead field in the Cloncurry district was discovered in 1923, and the lodes so far opened are distributed over a length of 5 miles by a width of one mile along the west bank of the West Leichhardt River. Large accumulations of high grade carbonate of lead are in sight on this field, which, according to experts, is the largest find in importance since the discovery of Broken Hill.

(iv) *South Australia.* Rich specimens of silver ore have been discovered at Miltalie and Poonana, in the Franklin Harbour district, also at Mount Malvern and Olivaster, near Rapid Bay, and in the vicinity of Blinman and Farina. The surrounding district is also highly mineralized, but, so far, has not been thoroughly prospected. Attention has recently been devoted to the silver-lead ores at Eukaby, near Baratta. In 1923 a discovery of silver-lead ore was made between Ooloo Dam and Mount Distance, north of the Flinders Range, but operations of any magnitude thereat are at present unlikely. The production of silver in 1923 was valued at £60.

(v) *Western Australia.* The quantity of silver obtained as a by-product and exported in 1923 was 109,005 ozs., valued at £16,036. In addition, 20 tons of pig lead, valued at £609, were exported, together with 3,172 tons of lead and silver-lead ore and concentrates valued at £43,416. The production of lead ore from the Northampton mineral field amounted in 1923 to 21,635 tons.

(vi) *Tasmania.* The silver produced in 1923 amounted to 638,601 ozs., valued at £91,339, and the lead to 4,784 tons, valued at £127,542. Of the silver, Magnet Mines returned 165,078 ozs. ; North Mt. Farrell, 187,346 ozs. ; Zeehan Mines, 132,738 ozs. ; Mt. Lyell, 122,528 ozs. ; and Round Hill, 26,875 ozs. The principal producers of lead were North Mt. Farrell, 1,927 tons ; Zeehan Mines, 1,188 tons ; and Magnet Mines, 1,336 tons.

(vii) *Northern Territory.* Silver-lead ores are found near Pine Creek, and at Mount Shoebridge near Brock's Creek railway station. There are a number of fair-sized galena lodes in the Pine Creek and McArthur River districts, but owing to costs of transport and realization little attention is devoted to them. No production of silver-lead ores was recorded in 1923.

4. **World's Production.**—The world's production of silver during the last five years for which particulars are available is estimated to have been as follows :—

SILVER.—WORLD'S PRODUCTION, 1919 TO 1923.

Total.	1919.	1920.	1921.	1922.	1923.
World's production in 1,000 fine ozs.	176,457	174,612	171,284	213,541	240,058

The share of Australia in the world's silver production in 1919 was estimated at 7,800,000 ozs., or about $4\frac{1}{2}$ per cent. on the total production, but in 1921, owing to the cessation of operations at the Broken Hill field, the total local extraction fell to 4,573,000 ozs., and the estimated silver contents of the ores, bullion, and concentrates exported to 732,000 ozs., the total being a little over 3 per cent. on the world's production. For 1923 the local extraction was set down as 7,646,000 ozs., and the contents of concentrates, etc., exported 5,110,000 ozs., the total representing about 5 per cent. on the world's production. The figures for the world's production are given on the authority of *The Mineral Industry*.

Arranged in order of importance the estimated yields in 1923 from the chief silver-producing countries were as follows :—

SILVER.—PRODUCTION, CHIEF COUNTRIES, 1923.

Country.	Production.	Country.	Production.
	Fine ozs. (⁰⁰⁰ omitted.)		Fine ozs. (⁰⁰⁰ omitted.)
Mexico	90,810	Japan	3,500
United States	73,335	Central America	2,000
South America	23,000	East Indies	1,200
Canada	17,754	Transvaal	1,200
Australia	12,756	Rhodesia	170
Europe	11,000	China	60
British India	5,000	Congo	30

5. **Prices.**—As the production of silver is dependent to a very large extent on the price realized, a statement of the average price per standard ounce in the London market during the last five years is given below :—

SILVER.—PRICES, 1919 TO 1923.

Price.	1919.	1920.	1921.	1922.	1923.
Pence per standard oz.	57.08	61.59	36.89	34.41	31.93

Prices in 1919 showed a sensational rise. Beginning with an average of about 48 $\frac{3}{4}$ d. per ounce during each of the first four months of the year, prices rose rapidly until in September the high average of 61.7d. was reached, followed by 64d. in October, 70d. in November, and 76.4d. in December. In January, 1920, the price rose to 79.8d., and in February the record figure of 85d. per oz. was reached. Next month, however, there was a drop to a little over 74d., and from August, when the price was 59.87d., the quotations fell rapidly, the figure in December being 41.85d. The average for January, 1921, was about 40d., but by the end of June the price had fallen to less than 35d., followed by a rise to 41 $\frac{1}{16}$ d. in October, and again declining to 35 $\frac{3}{4}$ d. at the end of the year. In March, 1922, the price fell to 33 $\frac{1}{4}$ d., and in September the average stood at 35 $\frac{5}{16}$ d., but thenceforward there was a rapid decline, the price for the closing month of the year being 31 $\frac{3}{4}$ d. There were no violent fluctuations in 1923, the lowest figure being 30.88d. in February, and the highest 33.38d. in December. The average for the year, 31.93d. was the lowest since 1916, when the figure was 31.32d.

6. **Employment in Silver Mining.**—The number of persons employed in silver mining during each of the last five years is given below :—

SILVER MINING.—PERSONS EMPLOYED, 1919 TO 1923.

Year.	N.S.W.	Q'land.	W. Aust.	Tasmania.	Nor. Ter.	Australia.
	No.	No.	No.	No.	No.	No.
1919	6,556	145	(a) 74	798	3	7,576
1920	1,931	143	(a) 238	517	2	2,831
1921	3,150	229	(a) 41	352	..	3,772
1922	4,712	321	(a) 152	495	..	(b) 5,686
1923	5,155	133	(a) 96	510	..	5,894

(a) Lead ore.

(b) Including 6 in South Australia.

The bulk of the employment was in New South Wales and Tasmania, the quantity of silver raised in the other States, excepting Queensland, being unimportant. The closing of the mines on the Broken Hill field during the greater part of the year was responsible for the falling-off in the total for 1920, while the resumption of normal activity in 1921 was delayed by the causes alluded to in 2 hereinbefore.

§ 5. Copper.

1. **Production.**—The production of copper in the various States has been influenced considerably by the ruling prices, which have undergone extraordinary fluctuations. The quantity and value of the local production as reported and credited to the mineral industry for the years 1919 to 1923 are shown in the following table :—

COPPER.—PRODUCTION, 1919 TO 1923.

State.	1919.	1920.	1921.	1922.	1923.
QUANTITY.					
	Tons.	Tons.	Tons.	Tons.	Tons.
New South Wales { Ingot and Matte	1,460	1,290	499	575	1,182
{ Ore .. ..	..	..	..	50	79
Queensland { Ingot and Matte	9,997	15,897	2,428	5,104	6,243
{ Ore .. ..	..	..	..	..	..
South Australia { Ingot and Matte	2,517	4,339	1,532	1,185	3,523
{ Ore .. ..	..	..	..	..	..
Western Australia { Ingot and Matte	4	137	206	660	1,057
{ Ore	455	1,511	1,040	352	3,394
Tasmania { Ingot and Matte	5,071	4,792	6,181	5,616	6,065
{ Ore .. ..	..	..	..	..	..
Northern Territory { Ingot and Matte	..	..	..	..	..
{ Ore	(a) 159	(a) 67	..	(a) 58	..
VALUE.					
	£	£	£	£	£
New South Wales	139,296	127,978	41,267	36,233	82,375
Queensland	952,501	1,551,995	168,556	321,535	430,746
South Australia	228,930	423,601	106,370	73,646	232,172
Western Australia	10,105	25,165	24,601	20,379	65,100
Tasmania	558,694	528,237	463,163	391,535	435,413
Northern Territory	(a) 2,349	(a) 780	..	798	30
Australia	1,891,875	2,657,756	803,957	844,126	1,245,836

(a) Year ended 30th June.

The heavy fall during 1921 was due to the low price of the metal preventing the profitable working of many of the copper mines throughout Australia, and the continuation of low prices had a depressing effect on production in 1922 and 1923.

2. **Sources of Production.**—(i) *New South Wales.* Production in this State in 1932 was valued at £82,375, as compared with £36,233 in the preceding year, the increase being due to the extraction of the small copper content in the Broken Hill silver-lead and zinc ore, about 899 tons of copper, valued at £61,761 being obtained from this source. The depression in this branch of the mining industry in 1922 was again accentuated by the low prices ruling for copper in 1923, coupled with the high cost of production and transport. No ore was raised in the Cobar division, which a few years ago was the largest producer of copper in the State, and the expensive machinery at the Great Cobar, Chesney, and Cobar Gold Mines, has been dismantled and removed.

The Tottenham division produced about 1,600 tons of ore during the year, and small quantities were raised in the Orange and Yass divisions. In the Canbelego division about 1,000 tons of 5 per cent. ore were raised for fluxing purposes, and 600 tons raised in the Molong division were used for converter lining.

(ii) *Queensland.* The yield in this State amounted in 1923 to 6,242 tons valued at £430,746, and shows a serious decline as compared with 1920 when nearly 16,000 tons valued at £1,552,000 were raised. The falling-off in the yield in recent years was, of course, due to the low prices realized for copper. Returns from the chief producing areas in 1923 were as follows:—Mount Morgan, 4,848 tons, valued at £334,495; Herberton, 155 tons, £10,730; Cloncurry, 518 tons, £35,776; and Chillagoe, 651 tons, £44,940. These yields naturally compare very unfavourably with those of 1920. The Cloncurry district—reckoned the richest and most extensive cupriferous area in Australia—which under normal circumstances produces more than half the copper output of the State, returned a yield of 518 tons, as against 7,640 tons in 1920.

(iii) *South Australia.* Taking the entire period over which production extended, the yield of copper in South Australia easily outstrips that of any other State. In recent years, however, Queensland, Tasmania, and New South Wales have come to the front as copper producers, as the table on the preceding page shows. Deposits of copper ore are found over a large portion of South Australia. A short account of the discovery, etc., of some of the principal mining areas, such as Kapunda, Burra Burra, Wallaroo, and Moonta, was given in earlier issues of the Official Year Book. During 1922 the output amounted to 1,185 tons, valued at £73,646, the lowest recorded since 1844. The decline was due to the closing down during the greater part of the year of the Wallaroo and Moonta mines. In 1923 the production amounted to 3,523 tons, valued at £232,172. Wallaroo and Moonta carried on mining and smelting during the first six months of the year, but the continued low price of copper led to a final closing down. It is stated that the low price is partly due to heavy production by companies in America, who, working with the latest appliances on immense deposits, can operate at a profit even with existing selling rates.

(iv) *Western Australia.* The value of copper and ore exported from this State in 1923 was £65,100. According to the returns, the production in the West Pilbara field was 221 tons, valued at £3,500; in the Northampton field, 9,629 tons, valued at £59,143; while the Phillips River field showed a production of 26 tons, valued at £541. The Whim Well mine on the Pilbara field was the principal producer, but operations were greatly restricted by the low price ruling for the metal.

(v) *Tasmania.* The quantity of copper produced in Tasmania during 1923 was 6,065 tons, valued at £435,413, practically the whole of the production being due to the Mount Lyell Mining and Railway Co. Ltd. This Company treated 48,394 tons of ore and concentrates and produced 6,104 tons of blister copper, containing copper, 6,052 tons; silver, 122,527 ozs.; and gold, 1,996 ozs.; the whole being valued at £460,598. The employees in 1923 numbered 1,059, of whom 536 were miners, 394 were engaged in the reduction works, and 129 in the railway department. Current for power and lighting is obtained from the Lake Margaret hydro-electric plant. To the end of 1923 this Company had paid upwards of £4,023,000 in dividends.

(vi) *Northern Territory.* Copper has been found at various places, but lack of capital and difficulty of transport prevent the development of the deposits. During 1923, about 4 tons of ore were raised from a deposit near the Kilgour River, about 80 miles from Borroloola.

3. Prices.—The great variation in price that the metal has undergone is shown in the following table, which gives the average price in London and New York during each of the last five years. The figures are given on the authority of the *The Mineral Industry*.

COPPER.—PRICES, 1919 TO 1923.

Year.	London Price per Ton Standard Copper.	New York Price in Cents per lb. Electrolytic Copper.
	£	Cents.
1919	90.80	18.69
1920	97.48	17.46
1921	69.36	12.50
1922	62.12	13.38
1923	65.84	14.42

As evidence of the tremendous monthly variation in the price of copper it may be noted that in December, 1916, the average London price of standard copper was £145 6s. 4d. per ton, while in April, 1922, it was quoted at £58 16s.

4. World's Production of Copper.—The world's production of copper during the five years 1919 to 1923, is estimated to have been as follows:—

COPPER.—WORLD'S PRODUCTION, 1919 TO 1923.

Year	1919.	1920.	1921.	1922.	1923.
World's production—tons ..	977,500	933,600	544,200	854,100	1,245,500

The yields from the chief copper-producing countries in 1923 were as follows:—

COPPER.—PRODUCTION, CHIEF COUNTRIES, 1923.

Country.	Production.	Country.	Production.
	Tons.		Tons.
United States	640,500	Canada	35,900
Chile	200,000	Australia	18,600
Africa	72,700	Germany	16,700
Japan	62,800	Cuba	10,700
Mexico	54,000	Bolivia	10,500
Spain and Portugal ..	51,000	Norway	7,900
Peru	43,100	Serbia	6,700

The Australian production in 1923 amounted to about 1.5 per cent. of the total.

5. Employment in Copper Mining.—The number of persons employed in copper mining during each of the last five years was as follows:—

COPPER MINING.—PERSONS EMPLOYED, 1919 TO 1923.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Ter.	Australia.
	No.	No.	No.	No.	No.	No.	No.	No.
1919	1,148	..	2,521	400	72	1,571	12	5,724
1920	583	2	1,815	1,285	116	1,577	2	5,380
1921	109	..	675	1,000	36	1,361	6	3,187
1922	66	..	882	70	10	948	6	1,982
1923	85	..	1,176	420	80	1,066	3	2,830

§ 6. Tin.

1. **Production.**—The development of tin mining is, of course, largely dependent on the price realized for the metal, and, as in the case of copper, the production has been subjected to somewhat violent fluctuations. The tables below show the quantity and value of the production as reported to the Mines Departments in each of the States during the five years, 1919 to 1923:—

TIN.—PRODUCTION, 1919 TO 1923.

State.	1919.	1920.	1921.	1922.	1923.
QUANTITY.					
	Tons.	Tons.	Tons.	Tons.	Tons.
New South Wales .. { Ingots	1,146	(e)887	(e)816	734	896
{ Ore	1,546	2,486	1,595	410	..
Victoria .. { Ingots	..	..	..	..	..
{ Ore	113	84	80	115	78
Queensland .. { Ingots	(b)	(b)	(b)	(b)	(b)
{ Ore(a)	994	1,486	1,050	1,098	903
Western Australia .. { Ingots	..	..	..	..	..
{ Ore	318	243	67	110	131
Tasmania .. { Ingots	1,580	1,310	790	679	1,160
{ Ore	(c)	(c)	..	..	..
Northern Territory .. Ore	(d)162	(d)180	(d) 83	(d)79	(d)136
VALUE.					
	£	£	£	£	£
New South Wales	416,623	413,794	163,451	154,698	180,789
Victoria	17,561	12,815	11,961	12,071	10,371
Queensland	143,167	252,054	98,471	99,758	114,945
Western Australia	47,269	49,449	6,485	10,930	15,095
Tasmania	395,794	369,362	130,257	112,407	236,955
Northern Territory	(d)30,021	(d)27,610	(d)7,793	5,891	13,887
Total	1,050,435	1,125,084	418,418	395,755	572,042

(a) Dressed tin ore, about 70 % tin.

(b) Included with ore.

(c) Included with ingots.

(d) Year ending 30th June.

As the table shows, there was a further decline in the production of tin in 1922, the values being the lowest recorded for the quinquennium. The falling-off was due to low prices and high production costs, and in some instances to exhaustion of ore supplies. Dredging operations in certain districts were hampered by insufficiency of water. In New South Wales there was again a reduced output from dredging in the New England district.

2. **Sources of Production.**—(i) *New South Wales.* Tin-mining operations were stimulated by the increased price of the metal in 1923, but the yield from the New England district, which is the principal producing area, was adversely affected by the exceptionally dry season. A large proportion of the output in New South Wales is obtained by dredging, the quantity so won in 1923 being 522 tons, valued at £72,552. Forty-one pump-dredges and one bucket dredge were in operation during the year. In the Tingha division of the Peel and Uralla district the yield amounted to 400 tons, valued at £49,922. The Emmaville division in the New England district showed a yield of 365 tons, valued at £47,892. The Vegetable Creek mine in this area was, for many years, the chief producer of tin in the State, but the payable wash available was practically exhausted in 1921. Operations were terminated in 1923, and the hopperings left were treated by tributors or miners. In the Wilson's Downfall division, 62 tons, valued at £7,959, were raised. From the Torrington division, 160 tons, valued at £20,117, were returned. The Ardlethan field, in the Lachlan division, produced ore and concentrates to the value of £18,242.

(ii) *Victoria*. The bulk of the production in 1923 was obtained by dredging and sluicing, the Cock's Pioneer Gold and Tin Co. in the Beechworth district contributing 77 tons, valued at £10,344. A small quantity of tin ore was raised by the Victorian Tin mines at Eskdale.

(iii) *Queensland*. The chief producing districts in Queensland during 1923 were Herberton, 529 tons, valued at £58,655; Kangaroo Hills, 124 tons, £24,868; Stanthorpe, 113 tons, £14,553; Cooktown, 75 tons, £9,213; Chillagoe, 45 tons, £5,637. The low prices of the metal in 1922 had a depressing effect on the industry, the production for the year being valued at £99,758 as compared with £252,000 in 1920. Prices improved towards the end of 1922 and the further increase in 1923 led to renewed activity, particularly on the Herberton and Kangaroo Hills fields.

(iv) *Western Australia*. The export of tin ore for the State during 1923 amounted to 131 tons, valued at £15,095. The production of black tin from the Greenbushes field amounted to 28 tons, valued at £3,024, and from the Pilbara field 24 tons, valued at £2,960. Deposits of tin occur in widely-separated localities in the Kimberley division, the Thomas River in the Gascoyne Valley, and at Poona and Coodardie on the Murchison gold-field.

(v) *Tasmania*. During 1923 the quantity of metallic tin won amounted to 1,160 tons, valued at £236,955. This return is a considerable advance on the figures for the two preceding years, but is still far below that recorded in 1919 and 1920. The yield from the North-Eastern division amounted in 1923 to 651 tons. Of the total, 309 tons were contributed by the mines in the Pioneer and Gladstone districts, while 338 tons came from the Ringarooma, Derby, and Branxholm area. The yield in the Eastern division amounted to 216 tons; the Avoca Mines furnishing 117 tons; the St. Helen's Mines 54 tons; and the Weldborough, Lottah, and Blue Tier, 45 tons. From the North-Western division the output was 247 tons, the bulk of it being raised by the Mt. Bischoff, with 194 tons, and Mt. Bischoff Extended, with 45 tons. The production in the Western division was returned at 46 tons.

(vi) *Northern Territory*. The yield of tin ore in 1923 amounted to 135 tons, valued at £13,887, of which 53 tons were raised at Marranboy. Stanniferous deposits are found at various places, including Marranboy, Hayes Creek, Mt. Wells, Wolfram Camp, Mary River, Horseshoe Creek, Bynoe Harbour, Umbrawarra, Pine Creek, and Mt. Ringwood. Two batteries for the treatment of tin ore have been erected by the Government, one at Marranboy, costing £20,163, and one at Hayes Creek, at an expense of £3,294.

3. *World's Production*.—According to *The Mineral Industry* the world's production of tin during each of the last five years was as follows. The figures have been slightly amended since last issue.

TIN.—WORLD'S PRODUCTION, 1919 TO 1923.

1919.	1920.	1921.	1922.	1923.
Tons.	Tons.	Tons.	Tons.	Tons.
119,465	120,713	99,728	130,660	127,391

The yields from the chief producing countries in 1923 were as follows:—

TIN.—PRODUCTION, CHIEF COUNTRIES, 1923.

Country.	Production.	Country.	Production.
	Tons.		Tons.
Federated Malay States ..	37,600	Nigeria	5,900
Bolivia	29,800	Australia	2,200
Billiton	15,600	Unfederated Malay States	2,000
Banka	15,400	India	1,300
China	8,700	South Africa	850
Siam	6,300	Cornwall	700

Based on the results for the last three years, Australia's share of the world's tin production would appear to be about 2.2 per cent.

4. Prices.—The average price of the metal in the London market for the years 1919 to 1923 was as follows:—

TIN.—PRICES, 1919 TO 1923.

Year.	Price per Ton.		Year.	Price per Ton.	
	£	s. d.		£	s. d.
1919	257	9 8	1922	159	9 0
1920	296	1 7	1923	202	5 0
1921	165	5 4			

The year 1921 was a disastrous one for the tin miner, as the price of the metal dropped by over £130 per ton as compared with that in the preceding year. Moreover, the fall had been more or less continuous since the early months of 1920, thus forcing the poorer mines to close down. In Malaya, the alluvial miners tried to carry on by working for low wages, and, in some cases, for no return, but the depression proved longer than was expected, and it is stated by *The Mineral Industry* that the necessity for picking the eyes of mines has in some measure depleted the world's reserves of stanniferous ground. The depressing influence of the stocks held in the East also adversely affected the market. Coupled with this was the low level of consumption, the Continental demand being poor, while the industry in Great Britain was hampered by the coal strike, and imports into the United States were far below the average. In 1922, the London market opened at £168 15s., but fell to £139 in March. Thereafter prices generally improved to £183 15s. at the close of the year. Conditions greatly improved in 1923. The price in January averaged £181 18s. 7d. rising to £219 15s. in March, but there was a drop to £181 5s. 3d. in July. Thereafter the figures rose steadily until December when £235 2s. 3d. was realized, while the average for the year stood at £202 5s.

5. Employment in Tin Mining.—The number of persons employed in tin mining during the last five years is shown below:—

TIN MINING.—PERSONS EMPLOYED, 1919 TO 1923.

Year.	N.S.W.	Victoria.	Q'land.	W. Aust.	Tas.	Nor. Ter.	Australa.
	No.	No.	No.	No.	No.	No.	No.
1919	2,171	38	1,114	209	1,303	190	5,025
1920	1,822	48	920	187	1,318	120	4,415
1921	1,321	31	864	59	699	100	3,074
1922	1,090	13	659	31	620	120	2,533
1923	1,047	7	703	35	842	170	2,804

Most of the tin in Victoria is produced by companies mining primarily for gold.

§ 7. Zinc.

1. Production.—(i) *New South Wales.* (a) *Values Assigned.* The production of zinciferous concentrates is practically confined to the Broken Hill district of New South Wales, where zinblende forms one of the chief constituents in the enormous deposits of sulphide ores. During the earlier years of mining activity on this field a considerable amount of zinc was left unrecovered in tailings, but from 1909 onwards improved methods of treatment resulted in the profitable extraction of the zinc contents of the accumulations at the various mines.

As the metallic contents of the bulk of the concentrates, etc., raised in the Broken Hill District are extracted outside New South Wales, the mineral industry of that State is not credited by the Mines Department with the value of the finished product. The

figures given hereunder, therefore, refer to the quantity and value of the zinc concentrates actually exported during the years specified.

ZINC.—CONCENTRATES, ETC., EXPORTED FROM NEW SOUTH WALES, 1889 TO 1923

Year.	Quantity of Zinc Concentrates, etc. Exported.	Value.	Year.	Quantity of Zinc Concentrates, etc., Exported.	Value.
	Tons.	£		Tons.	£
1889	97	988	1920	71,043	249,456
1891	219	2,622	1921	79,694	283,455
1899	49,879	49,207	1922	363,681	1,157,458
1919	72,294	247,395	1923	426,049	1,411,652

(b) *Local and Foreign Extraction.* A statement of the quantity of zinc extracted in Australia and the estimated zinc contents of concentrates exported overseas during the five years 1919 to 1923, will be found in § 18 hereinafter.

(ii) *Queensland.* At the Silver Spur mine at Texas, in the Stanthorpe division of Queensland, part of the ore is high in zinc and lead, but low in silver. Profitable extraction of the zinc and lead depends, however, on cheap transport. It is proposed to convey the high grade zinc ore by motor tractor to the railway at Inglewood. Zinc sulphide is produced by the Mount Garnet Mine in the Herberton district, and during 1916 several hundred tons of good quality ore were raised, but until a suitable treatment plant has been erected, it is stated that production cannot be economically undertaken.

(iii) *South Australia.* Zinc is known to exist in various localities in South Australia, but there has been no production during recent years.

(iv) *Other States.* During the year 1916, a small quantity of zinc, valued at £630, was produced in Western Australia, but there was no production recorded for subsequent years. The Tasmanian mineral returns for 1920 included an item of 9 tons of zinc ore, valued at £334, raised at the Swansea Mine, near Zeehan, but none was recorded for the last three years.

Investigations in regard to the Read-Roseberry zinc-lead deposits in Tasmania have proved the existence of 1,680,000 tons of ore, which, added to an estimated quantity of 915,000 tons of "probable" ore, make a total supply of 2,595,000 tons. It is stated that the metallurgical treatment of the ore can be successfully carried out, and that the deposits are amongst the richest and most important in the world.

The Electrolytic Zinc Co. at Risdon continued the treatment of calcines from Broken Hill, and during 1923 produced 41,153 tons of slab zinc, valued at £1,328,615. Silver-lead residues produced for shipment to Port Pirie contained 6,557 tons of lead and 917,425 ozs. of silver. The cadmium plant produced 123 tons of cadmium, valued at £34,776. About 1,282 men were employed at these works.

2. *Prices.*—During the four years 1911 to 1914, the London price of zinc averaged £23 15s. per ton, ranging from £21 in 1914 to £26 3s. 4d. in 1912. Owing to the heavy demand and other circumstances arising out of the war, the prices in 1915 and 1916 reached the very high average of £67 11s. 1d. and £72 1s. 5d. per ton respectively. For 1917 the average recorded was £52 8s. 3d., for 1918, £54 3s. 7d., for 1919, £42 17s. 7d., for 1920, £44 7s. 5d., for 1921, £25 16s. 11d., for 1922, £30, and for 1923, £33 1s. 2d. per ton.

§ 8. Iron.

1. *General.*—The fact that iron-ore is widely distributed in Australia has long been known, and extensive deposits have been discovered from time to time at various places throughout the States. It will appear, however, from what is stated below, that the utilization of these deposits for the production of iron and steel is, at present, confined to New South Wales.

2. *Production.*—(i) *New South Wales.* (a) *Extent of Deposits.* Iron ores of various composition are found widely distributed throughout the State, but some of the deposits are at present of no commercial importance on account of their small and scattered extent, or by reason of their distance from means of transport. Excluding deposits

too far from existing railways, or too small to warrant exploitation, as well as aluminous ores, the quantity of iron ore available by quarrying has been set down as 15 million tons. There is, in addition, a large tonnage available by the more costly method of mining. Altogether it appears probable that the total quantity available for smelting is about 53 million tons. The chief sources of supply during recent years were the deposits at Cadia, Carcoar, and Tallawang.

(b) *Lithgow Iron Works.* Reference to the events leading up to the establishment of ironworks at Lithgow will be found in earlier issues of the Year Book (see No. 3. p. 508). During 1923 the following materials were received at the blast furnaces: Iron ore, 173,507 tons; limestone, 86,985 tons; slag, 6,320 tons; and coke, 142,719 tons. The iron ore was raised from quarries at Tallawang, Cadia, Coombing Park, and Breadalbane, and the pig iron produced therefrom amounted to 94,350 tons.

The following table shows the quantity and value of pig iron produced in New South Wales during the last five years from locally-raised ores only:—

PIG IRON.—PRODUCTION FROM LOCAL ORES, NEW SOUTH WALES, 1919 TO 1923.

Particulars.		1919.	1920.	1921.	1922.	1923.
Quantity	.. Tons	80,941	86,096	90,053	54,856	94,350
Value	.. £	445,175	645,720	639,376	248,909	707,625

The figures quoted above refer to production from *local* ores only, and as such credited to the New South Wales mineral industry. They do not, of course, represent the total production of pig iron in New South Wales, since, as shown in the succeeding paragraph, a considerable quantity of ore raised in South Australia and credited therefore to the mineral returns of that State is treated in New South Wales.

(c) *Newcastle Iron Works.* The Broken Hill Proprietary Company established works for the manufacture of iron and steel on a large scale at Newcastle, and operations were started early in 1915. The Company is utilizing the immense deposit of iron ore at the Iron Knob quarries in South Australia, which are connected with the seaboard at Whyalla, a distance of about 34 miles, by the Company's tramway. The ore quarried for the year ended 30th November, 1924, amounted to 568,691 tons. Extensive limestone works and loading bin at Devonport, Tasmania, as well as quarries in New South Wales for dolomite, magnesite, etc., are also owned by the Company.

The output of pig iron for the year ended 30th November, 1924, amounted to 327,809 tons, and of steel ingots to 302,384 tons. Further details in regard to the activities of these works in 1921 were given on page 347 of Official Year Book No. 15. The steel works possess three blast furnaces of a normal daily producing capacity of 1,300 tons, and a fourth furnace of 100 tons for the production of foundry iron. There are seven 65-ton basic open-hearth furnaces capable of producing 8 to 10,000 tons of ingot steel weekly, and 2 additional 65-ton open hearth furnaces are nearing completion. The works are supplied with a 35-inch blooming mill for the production of blooms, plates, etc., a 28-inch rolling mill for the manufacture of heavy rails, structural steel, billets, etc., an 18-inch mill for making light rails, structural shapes, fishplates, and heavy sections of merchant bar and billets, a 12-inch mill and an 8-inch mill, each for merchant bars, etc., a continuous rod mill for the production of wire rods, and a fishplate mill. A steel foundry, containing one acid open-hearth furnace, and a cupola furnace for iron castings, with a direct metal foundry which takes the hot metal from the blast furnaces, supply all necessary castings.

The Company also possesses 224 by-product coke ovens, and connected with this department are the tar, sulphate of ammonia, and benzol plants.

(d) *Iron Oxide, etc.* A quantity of iron oxide is purchased by the various gasworks for use in purifying gas, and it is also to some extent employed as a pigment, the output in New South Wales being drawn chiefly from the deposits in the Port Macquarie, Moss Vale and Yass Divisions. During 1923 the iron oxide raised amounted to 2,716 tons, valued at £3,081, the product being partly used for the manufacture of pigments, and partly by gas companies for purifying purposes.

(ii) *Victoria*. Iron ore has been located at various places in Victoria, particularly at Nowa Nowa in the Gippsland district, and at Dookie. A blast furnace was erected in 1881 near Lal Lal, on the Moorabool River, and some very fair quality iron was produced, which was used for truck wheels and stamper shoes at the Ballarat mines. The fall in the price of the metal, however, led to the closing of the works. In his report for 1905 the Secretary for Mines stated that without special assistance to the industry there does not seem to be any prospect of the deposits being profitably worked.

(iii) *Queensland*. Queensland possesses some extensive deposits of iron ore, which are mined chiefly for fluxing purposes in connexion with the reduction of gold and copper ores. During the year 1921, 4,061 tons of ironstone flux, valued at £5,976, were raised, the bulk of which came from Iron Island in the Rockhampton district. No production was recorded in 1922, and 200 tons only, valued at £150, were raised in 1923. It is stated that Queensland possesses within its own borders an abundance of the ore, fuel, and fluxes required for the carrying on of a large ironworks. The important lodes on the Wild River are a promising source of supply for the proposed State iron and steel works.

(iv) *South Australia*. South Australia possesses some rich deposits of iron ore capable of being mined for an indefinite period. The best known deposit is the Iron Knob, a veritable hill of iron ore of high percentage, situated about 40 miles W.S.W. from Port Augusta. A recent survey places the probable reserves of ore in the Iron Knob and Iron Monarch deposits at 133 million tons, with an average content of 63.64 per cent iron. The Broken Hill company utilizes ore from this quarry at its ironworks at Newcastle, New South Wales, and the amount raised for the year 1921 was 506,993 tons, valued at £587,267, and for 1922, 51,423 tons, valued at £58,177, the heavy fall in the latter year being due to the temporary closing of the works. Owing to resumption of activity in 1923 the production for the year rose to 384,434 tons, valued at £445,303. It is estimated that the deposits in the Middleback Range contain 32 million tons of slightly higher grade than the Iron Knob ore.

(v) *Western Australia*. This State has some very rich deposits of iron ore, but owing to their geographical position, the most extensive fields at the present time are practically unexploited, the production in the State being confined chiefly to that needed for fluxing purposes. The ores are found over a stretch of country from Kimberley to Cape Leeuwin. Amongst the most important of the high-grade deposits are those at Yampi Sound in the Kimberley division, which are estimated to contain 97 million tons of very rich ore; Wilgie Mia, where the ore in sight is estimated at 27 million tons; Gabanintha, near Nannine, with over a million tons above surface level; Mount Gibson, in the south-west corner of the Yalgoo gold-field, where there are about 10 million tons of ore adapted for steel manufacture by the acid process; Talling Range in the westernmost angle of the Yalgoo gold-field where the deposits amount to several millions of tons; and Koolyanobbing, near Southern Cross, where there is a very large deposit of high-grade micaceous hematite. The production of pyritic ore reported in 1922 amounted to 3,441 tons, valued at £4,203, but none was recorded in 1923.

(vi) *Tasmania*. Probably the most extensive deposits of iron ore in Tasmania are those at Rio Tinto, Savage River. The ore is chiefly magnetite, containing over 65 per cent. iron, and is well situated for open cutting to a great depth. Estimates place the quantity of ore available at as high as 50 million tons. There is an immense deposit of red hematite at the Blythe River, near Burnie, the lode being over a mile in length, and up to 100 feet in width. Estimates as to the quantity of ore available vary from 17 to 30 million tons. In fairly close proximity to the Hampshire Railway Station there is a deposit of magnetite estimated to contain 20 million tons, while a deposit at the Tenth Legion mine in the Zeehan district is stated to contain 2 million tons. Deposits of brown oxide and magnetic iron ore containing $1\frac{1}{2}$ million tons are found in the Beaconsfield district. On the Dial Range there is a deposit of red hematite containing high grade ore. North-west of this outcrop is situated the Iron Cliffs lode, about 4 miles from Penguin. These two deposits are estimated to contain 700,000 tons. Extensive deposits of hematite and magnetite are found on the Nelson River, the outcrop being 100 feet wide over a large distance. The total quantity of iron ore available in Tasmania has been roughly estimated at 100 million tons.

The total production of iron ore in 1908 was 3,600 tons, valued at £1,600, all raised by the Tasmanian iron mine at Penguin, but since the closing down of that mine in 1909 there has been no further production. Iron pyrites for the manufacture of sulphuric acid and of manures is produced on the West Coast, the quantity raised in 1923 being 11,882 tons, valued at £26,737.

(It may be noted here that the Sulphur Bounty Act of 1923 provides for a bounty of £2 5s. per ton in respect of sulphur produced from Australian pyrites and other sulphide ores and concentrates.)

(vii) *Northern Territory.* Large bodies of rich ironstone have been discovered in various parts of the Territory, particularly between the Adelaide River and Rum Jungle. Owing to the lack of local coal, however, the deposits possess no immediate value.

3. Iron and Steel Bounties.—The local production of iron and steel has been encouraged by various legislative enactments (see Official Year Book No. 15, p. 348). Under "The Iron and Steel Products Bounty Act 1922," bounties are payable on fencing wire, galvanized sheets, wire-netting, and traction engines made in Australia. It is essential that these articles be made from materials produced and manufactured in Australia, unless imported material is authorized after enquiry and report by the Tariff Board. The total payments in any one financial year must not exceed £250,000. Rates of bounty are—for fencing wire and galvanized sheets, £2 12s. per ton for wire-netting, £3 8s. per ton; and for traction engines from £40 to £90 each, according to brake horse-power.

The Act of 1918 provided for bounty amounting to a total of £200,000 on black steel sheets and galvanized sheets produced in Australia under prescribed conditions up to the 30th September, 1923.

4. World's Production of Iron and Steel.—The Australian production of iron and steel at present forms a very small proportion of the world output. According to The Statesman's Year Book, the world's production of each commodity in the years specified for the principal countries was as follows :—

PIG IRON AND STEEL—WORLD'S PRODUCTION, 1913, and 1921 to 1923.

Country.	Pig Iron.				Steel—Ingots and Castings.			
	1913.	1921.	1922.	1923.	1913.	1921.	1922.	1923.
	(Tons—000's omitted.)				(Tons—000's omitted.)			
United States ..	30,653	16,506	26,851	39,500	31,301	19,744	35,603	44,400
Great Britain ..	10,260	2,616	4,902	7,360	7,664	3,703	5,881	8,480
France ..	5,126	3,308	5,147	5,000	4,614	3,010	4,464	4,750
Belgium ..	2,428	862	1,578	2,118	2,428	780	1,539	2,185
Luxemburg ..	..	955	1,650	1,350	..	747	1,368	1,117
Germany ..	19,000	6,096	8,000	4,000	18,631	8,700	9,000	5,000
Czecho-Slovakia ..	..	532	339	590	..	904	630	738
Poland ..	..	640	458	492	..	1,476	930	935
Japan ..	56	200	300	300	13	558	500	500
Other Countries ..	9,659	2,985	2,713	3,870	10,368	2,865	3,183	4,468
Total ..	77,182	34,700	51,938	64,580	75,019	42,487	63,098	72,573

The returns for the year 1923 have been partly estimated and are subject to revision when the complete particulars for all countries have been received.

§ 9. Other Metallic Minerals.

1. Antimony.—The production of antimony ore in New South Wales amounted in 1921 to 125 tons, valued at £900, the output being obtained in the Hillgrove and Kempsey divisions, but the low prices ruling in 1922 and 1923 caused a temporary cessation of mining. Deposits of the mineral are also found in the Glen Innes and Drake divisions, and in other areas. The total quantity of antimony (metal and ore) raised in New South Wales

up to the end of 1923 was 19,032 tons, valued at £344,588. The production of antimony concentrates in Victoria during 1923 amounted to 882 tons, valued at £14,112. The whole of the production came from ore raised by a company operating at Costerfield. In Queensland extensive deposits are found at Neerdie in the Wide Bay district, at Wolfram Camp, on the Hodgkinson field, on the Palmer River in the Ravenswood district, and at various places in the Herberton district. Ore has also been obtained in the Dividing Range near Herberton, and adjacent to some of the central tributaries of Emu Creek. A promising lode was recently discovered near Cooktown. Owing to the low price of the metal in 1919 production was practically negligible; while none was recorded during the period 1920 to 1923. In Western Australia lodes of stibnite carrying gold have been found in the Roeburne district. During 1917, 12 tons of antimony, valued at £258, were exported, but there was no subsequent production until 1920, when 3 tons, valued at £45, were exported. There was no record of production in the years 1921 to 1923.

2. **Arsenic.**—In New South Wales the production of arsenical ore in 1923 amounted to 11,493 tons, valued at £28,178, of which 7,655 tons were raised by the Valla Gold Mines in the Bellingen Division; 2,488 tons at the Ottery Mine in the Emmaville division; 417 tons in the Hillgrove Division; 300 tons in the Moruya Division; and 200 tons in the Torrington Division. Small quantities were also produced in the Deepwater and Tumut Divisions. During 1917 the high price ruling for arsenic, and the urgency for the need of supplies in connexion with the destruction of prickly pear, led to the reservation by the Queensland Mines Department of an extensive area of arsenic-bearing deposits at Jibbinbar, in the Stanthorpe district. Production in 1923 from the Stanthorpe district amounted to 610 tons, valued at £27,780, of which 340 tons valued at £19,040 were raised at the State mine. There is a strong demand for the product not only for the destruction of prickly pear, but for the manufacture of arsenical dip solutions and other purposes. In South Australia attention is being devoted to arsenic-bearing minerals at some of the old mines, and prospecting is being carried on at the Preammima Mine and at Sedan. During 1920 Western Australia exported 1,765 tons of arsenical ore, valued at £4,260. In 1921 the export fell to 7 tons, valued at £16, but there was an increase to 1,075 tons, valued at £1,784, in 1922. The arsenical ore (contained in gold ore) exported in 1923 was valued at £686.

3. **Bismuth.**—Ores of this metal are found in association with tungsten and molybdenum, and sometimes tin, in New South Wales, but owing to lack of a market the production of ore and concentrates in 1923 was only 6 tons, valued at £1,640, of which 3 tons valued at £700 were obtained in the Torrington division. Ore was also raised in the Glen Innes, Oberon, Dalmorton, Pambula, and Tenterfield divisions, but only a small quantity was treated. The total production to the end of 1923 was 779 tons, valued at £226,419. In Queensland wolfram and bismuth have been found in various districts, but owing to the low prices obtainable the chief centres of production—Mount Carbine, Wolfram, Bamford, etc.—were practically idle in 1923. In South Australia deposits are found at Balhannah, at Mount Macdonald, and at Murninnie on the shores of Spencer's Gulf. A small quantity of bismuth was exported from Western Australia in 1919, but none was recorded subsequently. In Tasmania a small quantity, valued at £21, was raised in 1921 by the S. & M. mine at Middlesex, but there was no production in 1922 and 1923.

4. **Chromium.**—The output of chromite in New South Wales during 1923 was estimated at 1,192 tons, valued at £3,082, raised in the Barraba division. Prospecting operations were carried on during the year at Attunga in the Tamworth division. Chrome iron ore is found in Queensland in the Rockhampton district, and about 160 tons were raised in 1920 by the Mount Morgan Company at Glen Geddes, but there was no production during the last three years.

5. **Cobalt.**—This metal was found at Carcoar in New South Wales in 1889, and subsequently at Bungonia, Port Macquarie, and various other places. There was no export of cobalt since 1911, and the total produced since 1860 amounted in value to only a little over £10,000. In Queensland a rich deposit was opened up in 1920 at Mount Cobalt in the Cloncurry area, and the production in 1923 amounted to 217 tons, valued at £43,449. A discovery of the metal was made in 1923 at Redcap on the Chillagoe field. Although the product is a valuable one, greater development is hindered by the uncertainty of the demand.

6. **Lead.**—Lead mining *per se* is not practised to any extent in Australia, the supply of the metal being chiefly obtained in conjunction with silver. In New South Wales the Mines Department took credit in 1922 for 8,113 tons, valued at £194,712, and the production to the end of 1922 was taken as 327,000 tons, valued at £6,442,000. Owing to the closing down of the treatment works at Cockle Creek there was no production within the State in 1923, the whole of the lead concentrates being forwarded for treatment outside the State. As stated previously, the metallic contents of the major portion of the silver-lead ores are extracted outside New South Wales, and these figures refer only to lead values assigned as the produce of the State. In Victoria, oxides, sulphides, and carbonates of lead are found in the reefs on most of the goldfields. The deposits are not, however, of sufficient extent to repay the cost of working. In Queensland the deposits are worked chiefly for the silver, copper or gold contents of the ore, the lead produced in 1923 amounting to 5,487 tons, valued at £147,233. Of this total the Chillagoe area produced 5,038 tons, valued at £135,093; the Herberton area, 97 tons, valued at £2,606; Etheridge, 122 tons, £3,293; Brisbane, 129 tons, valued at £3,566; and the Cloncurry area 98 tons, valued at £2,628. Lead has been found at many places in South Australia, although, with few exceptions the lodes are not of great size. During 1923 pig lead exports from Western Australia amounted to 20 tons, valued at £609. Tasmanian lead production in 1923 was returned as 4,784 tons, valued at £127,542, of which the Zeehan mines contributed 1,188 tons, the North Mt. Farrell mines, 1,927 tons, Magnet, 1,336 tons, and Round Hill mines, 297 tons.

7. **Manganese.**—During 1923 the output of manganese ore in New South Wales amounted to 2,556 tons, valued at £7,748, practically the whole of the production being raised in the Grenfell division. A small quantity amounting to 40 tons, was produced in the Parkes division, and ore was raised but not sold in the Deepwater and Tamworth divisions. In Victoria the production in 1922 amounted to 150 tons, valued at £930, raised in the Heathcote division, but none was raised in 1923. In Queensland there are extensive deposits of low-grade manganese ores in various places. High grade ore is not available in quantity, but the extensive deposits of medium grade at Kandanga should in future become a valuable asset in the steel industry. Production in 1923 amounted to 74 tons, valued at £332, of which 40 tons were raised in the Stanthorpe division, and 30 tons in the Gympie division. Extensive deposits of the ore were mined at Boolcunda in South Australia some years ago. Deposits are being actively worked at the present time at Pernatty, Hawker, and Gordon. The production in 1923 was valued at £1,581. The Pernatty ore is of high grade, and being free from deleterious substances is specially suited for use in making high-grade steel. In Western Australia ores of the metal are found widely scattered, the black oxide being especially plentiful in the Kimberley district. Extensive deposits exist in a locality 18 miles north-west from Peak Hill. In the northern part of the Cue district the deposits cannot at present be profitably worked owing to absence of cheap transport facilities. The export of manganese in 1923 consisted of 22 tons, valued at £200.

8. **Molybdenum.**—Owing to the lack of demand for the mineral there was no production of molybdenite in New South Wales during the year 1921, and only 2 tons, valued at £320, were raised in 1922 in conjunction with mining for bismuth. The production in 1923 amounted to 9 tons, valued at £1,816, obtained from mines at Kingsgate and Dundee in the Glen Innes division. Prospecting was carried on in the Dalmorton and Kempsey divisions. The total production of molybdenite since its discovery is stated at 810 tons, valued at £208,000. In Victoria 2,000 tons of molybdenite ore producing 50 tons of concentrates valued at £6,250, were raised in 1923 at Everton. The production in Queensland for 1923 was 9½ tons, valued at £2,069, raised almost entirely on the Chillagoe field. The Wombah mine near Mount Perry is regarded by geologists as one of the most promising sources of molybdenite in Australia. A small quantity was produced in 1914 from the mines in the Moonta district in South Australia, and the occurrence of the metal is reported from various other localities. At the Yelta mine bunches of the ore are scattered through the copper ore. Molybdenite occurs in small quantities at various localities in Western Australia, the production recorded in 1922 being valued at £500, but none was recorded in 1923. In the Northern Territory, molybdenite is found at Yenberrie, where it is stated that the ore increases in richness as the workings become deeper.

9. **Radium.**—Deposits of radio-active ores occur in lode form in South Australia, and are believed to be richer and more extensive than any others so far located. There is an extensive deposit at Radium Hill, Olary, about 12 miles from Cutana railway siding, and another at Mount Painter in the Northern Flinders Ranges. Ores from both localities have yielded radium. Pure radium bromide was produced at a treatment plant in Sydney, and up to the end of 1914, when operations were suspended, 466 milligrammes were extracted. The Radium and Rare Earths Treatment Co. has been formed to exploit the radio-active ores at Olary, and a syndicate has taken up the workings at Mount Painter.

10. **Tungsten.**—Wolfram and scheelite, the principal ores of tungsten, are both mined to some extent in New South Wales, but the low prices obtainable caused a cessation of mining activity in this direction in the last three years. A large proportion of the total production from tungsten ores is obtained from the wolfram worked at Torrington, but, the production in 1923 amounted to 2 tons only. The deposits at Hillgrove are the principal source of scheelite. In Victoria the production of wolfram was returned in 1920 as 7½ tons, valued at £355, yields being obtained at Mount Murphy and the Tambo River, but there was no subsequent production. In Queensland, tungsten ores are found in several districts, but owing to low prices production in 1923 was suspended. (See also "Bismuth.") A deposit of wolfram was discovered near Yankalilla, in South Australia, as far back as 1893, but the production up to date has been small. It is believed that careful examination will lead to increased production from the deposits at Callawonga Creek. There was no production of tungsten minerals in 1923 in Western Australia. Tungsten ores are commonly met with in the gold reefs, and both wolfram and scheelite have been recorded as occurring in several widely-separated localities. In the Northern Territory wolfram is found at Hatches Creek, Wauchope Creek, Wolfram Creek, Hidden Valley and Yenberrie. Numerous samples of high grade ore have been obtained at the Frew River in Central Australia. The production in 1923 was, however, trifling. Wolfram is mined at various points in Tasmania, the production for 1923 being 97 tons, valued at £6,150, obtained chiefly at the Avoca mines. Scheelite has been discovered on King Island in Bass Strait, but there was no production in 1923.

11. **Other Metals.**—In addition to the metals enumerated above there is a large number of others occurring in greater or less degree, while fresh discoveries are being constantly reported.

§ 10. Coal.

1. **Production in each State.**—A historical account of the discovery of coal in each State will be found in preceding issues of the Year Book. (See No. 3, pp. 515-6.) The quantity and value of the production in each State, and in Australia, during the five years 1919 to 1923, are given in the table hereunder:—

COAL.—PRODUCTION, 1919 TO 1923.

Year.	N.S.W.	(a) Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
QUANTITY.							
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1919 ..	8,631,554	423,945	931,631	..	401,713	66,253	10,455,096
1920 ..	10,715,999	442,241	1,109,913	..	462,021	75,429	12,805,603
1921 ..	10,793,387	514,859	954,763	..	468,817	66,476	12,798,302
1922 ..	10,183,133	559,284	958,519	..	438,443	69,238	12,208,617
1923 ..	10,478,513	476,823	1,060,662	..	420,714	80,718	12,517,430
VALUE.							
	£	£	£	£	£	£	£
1919 ..	5,422,846	372,075	614,307	..	270,355	47,004	6,726,587
1920 ..	7,723,355	464,739	841,551	..	350,346	64,005	9,443,996
1921 ..	9,078,388	603,323	831,483	..	407,117	63,446	10,983,757
1922 ..	8,507,946	664,251	840,472	..	381,555	61,016	10,455,240
1923 ..	8,607,892	525,270	925,227	..	368,949	70,797	10,498,135

(a) Exclusive of brown coal.

The figures for Victoria quoted above are exclusive of brown coal, the quantity and value of which during the last five years were as follows:—

BROWN COAL.—PRODUCTION, VICTORIA, 1919 TO 1923.

Year.	Quantity.	Value.	Year.	Quantity.	Value.
	Tons.	£		Tons.	£
1919	111,628	34,542	1922	90,402	31,179
1920	162,682	64,180	1923	116,888	38,019
1921	79,224	31,074			

2. Distribution and Quantity of Coal in each State.—(i) *New South Wales.* The collieries in the Northern, Southern, and Western coal-fields are contained in an area of less than 1,000 square miles, and the amount of coal available therein is estimated at 20,000,000,000 tons.

In addition to this quantity of high-grade coal, it is believed that 40,000,000,000 tons of good coal may be won in the remaining 15,000 square miles comprising the Coal Measures area.

Further, the quantity of inferior coal which may be brought to the commercial stage by washing and other means is set down provisionally at 60,000,000,000 tons.

The combined total of these estimates reaches 120,000,000,000 tons, of which the actual reserves of good coal may be stated at 20,000,000,000 tons.

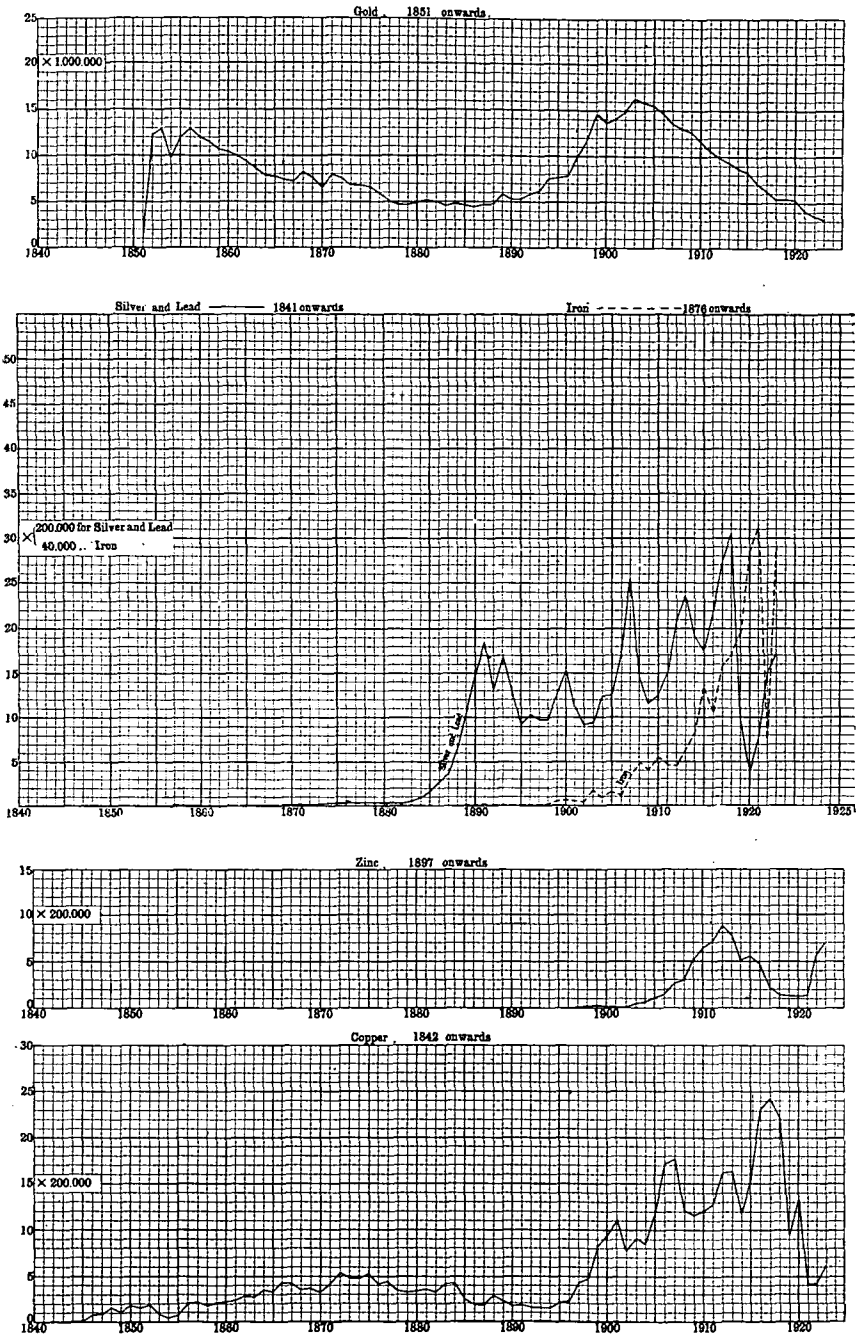
According to Mr. E. F. Pittman, the coal-bearing rocks of New South Wales may be classified as follows:—

COAL-BEARING ROCKS OF NEW SOUTH WALES.

Geological Age.	Maximum Thickness of Coal-bearing Strata.	Locality.	Character of Coal.
I. Tertiary—Eocene to Pliocene ..	Approx. 100 ft.	Kiandra, Gulgong, and Chouta Bay	Brown coal or lignite
II. Mesozoic—Triassic or Trias-Jura	2,500 „	Clarence and Richmond Rivers	Coal suitable for local use only
III. Palæozoic—Permo-Carboniferous	13,000 „	Northern, Southern, and Western Coalfields	Good coal, suitable for gas, household and steaming
IV. Palæozoic—Carboniferous ..	10,000 „	Stroud, Bullah Dellah	Very inferior coal, with bands; of no value

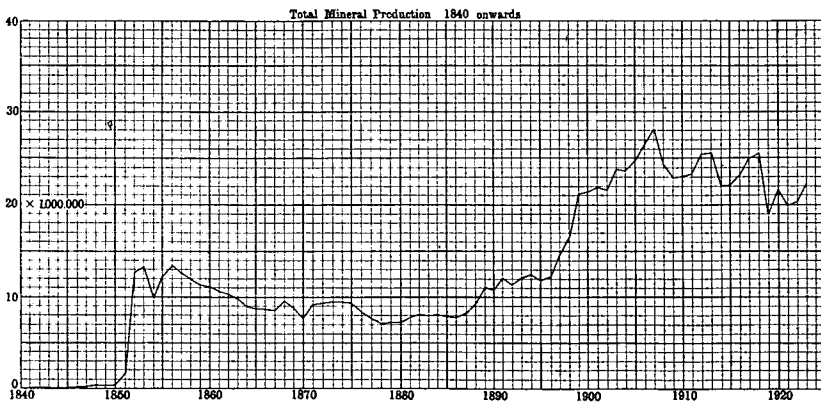
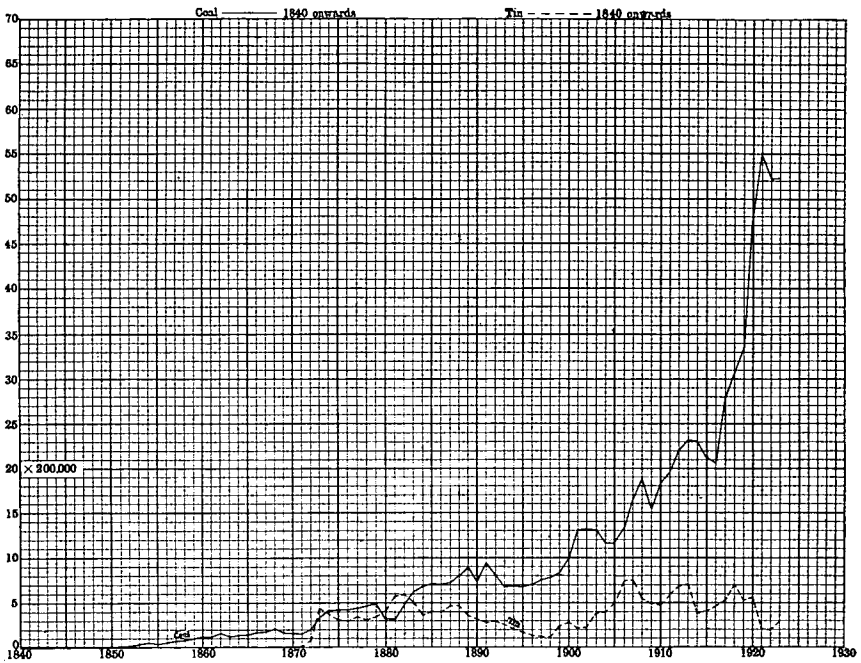
In regard to the Tertiary deposits, it may be noted that no serious attempt has been made to use the coal as fuel in New South Wales. At Kiandra a deposit of lignite was found to possess a maximum thickness of 30 feet, but as a general rule the seams vary from 3 to 4 feet in thickness. The Triassic or Trias-Jura deposits in the Clarence and Richmond districts contain numerous seams, but the coal is largely intersected by bands, while its high percentage of ash renders it unfit for use as fuel for industrial purposes. These beds extend under the great western plains, but the presence of artesian water precludes the possibility of their being worked. The Clarence basin extends into Queensland, and at Ipswich thick and valuable seams of coal are worked. There is also the Coorabin (Riverina) field, an isolated basin with coal from 8 ft. to 36 ft. in thickness over an area of 15 square miles. It is in the Permo-Carboniferous division that the great productive coal seams of the State are found, the area which they cover being estimated at about 16,550 square miles. The deepest part of the basin is somewhere in the vicinity of Sydney, where the “Sydney Harbour Colliery” worked the top seam at a depth of 2,884 feet. It is stated that the coal is specially suitable for coke manufacture. The mine, which is the deepest coal mine in Australia, recommenced operations in September, 1923, after having been idle for nearly nine years. Towards the north, south and west the seams rise towards the surface, and outcrop in the neighbourhood of Newcastle, Bulli and Lithgow. The coal from the various

VALUES OF THE PRINCIPAL MINERALS PRODUCED—AUSTRALIA, 1842 TO 1923.



EXPLANATION.—The values shown are those of the total Australian production of certain of the most important minerals in successive years from 1840 to 1923.

The base of each small square represents an interval of one year, and the vertical height represents in the case of gold £1,000,000; in the case of silver and lead, zinc, and copper £200,000; and in the case of iron, £40,000.

VALUES OF PRINCIPAL MINERALS PRODUCED—AUSTRALIA, 1840 TO 1923—*continued*.

EXPLANATION.—The values shown are those of the total Australian production of certain of the most important minerals in successive years from 1840 to 1923.

The base of each small square represents an interval of one year, and the vertical height represents in the case of coal and tin £200,000, and in the case of total mineral production £1,000,000.

districts embraced in this division differs considerably in quality—that from the Newcastle district being especially suitable for gas-making and household purposes, while the product of the Southern (Illawarra) and Western (Lithgow) is an excellent steaming coal. At the present time the Greta coal seams are being extensively worked between West Maitland and Cessnock, and this stretch of country, covering a distance of 15 miles, is now the most important coal-mining district in Australasia. The Permo-Carboniferous measures have in various places been disturbed by intrusions of volcanic rocks, which in some instances have completely cindered the seams in close proximity to the intrusive masses, while in other instances the coal has been turned into a natural coke, portion of which realized good prices as fuel.

The table hereunder gives the yields in each of the three districts during the five years 1919 to 1923 :—

COAL.—PRODUCTION IN DISTRICTS, NEW SOUTH WALES, 1919 TO 1923.

District.	1919.	1920.	1921.	1922.	1923.
	Tons.	Tons.	Tons.	Tons.	Tons.
Northern	5,629,253	7,320,510	7,493,002	7,156,921	6,861,759
Southern	1,826,574	1,902,889	2,062,958	1,878,594	2,170,699
Western	1,175,727	1,492,600	1,237,427	1,147,618	1,446,055
Total	8,631,554	10,715,999	10,793,387	10,183,133	10,478,513

The output in 1921 was the highest yet recorded, the decrease in 1922 being to some extent accounted for by the closing down of the steel works at Newcastle. The decline in production shown by the Northern district in 1923 was brought about mainly by stoppage of work on the Maitland coal-field from April to the beginning of August.

(ii) *Victoria.* (a) *Black Coal.* The deposits of black coal in Victoria occur in the Jurassic system, the workable seams, of a thickness ranging from two feet three inches to six feet, being all in the Southern Gippsland district. It is stated that the actual reserves of bituminous coal amount to about 15 million tons, or, including seams 2 feet and over at depths between 4,000 and 6,000 feet to 25 million tons. The tonnages of extractable black coal in the Korumburra, Jumbunna and Outtrim districts are given as 1,305,000 tons, 600,000 tons, and 160,000 tons respectively, while the Wonthaggi area is capable of yielding about 20 million tons.

The output of black coal from the chief Victorian collieries during the last five years was as follows :—

BLACK COAL.—PRODUCTION, VICTORIA, 1919 TO 1923.

Year.	State Coal Mine.	Outtrim Coal Syndicate.	Jumbunna Coal Company.	Coal Creek.	Austral Coal.	Powlett North Woolamai.	Sunbeam Collieries.	Total Production.	Value.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	£
1919 ..	361,871	..	21,716	1,465	11,824	22,335	4,734	423,945	372,075
1920 ..	376,285	..	19,644	753	12,260	23,310	9,989	442,241	464,739
1921 ..	451,255	3,021	13,284	595	10,018	20,255	16,431	514,859	603,323
1922 ..	511,174	1,947	15,423	..	12,570	..	9,770	(a) 559,284	664,251
1923 ..	418,394	2,562	9,246	..	9,309	..	12,245	(b) 476,823	523,270

(a) Includes also Cardiff Colliery, 3,488 tons; South Gippsland Coal Co., 2,889 tons; Outtrim Extended, 1,813 tons; Gippsland Coal Co., 180 tons; and Strezlecki Co-operative, 30 tons.

(b) Includes also Cardiff Colliery, 11,934 tons; Outtrim North, 1,100 tons; Outtrim Extended, 3,936 tons; Dudley Syndicate, 3,998 tons; South Gippsland Co., 4,006 tons; and Mount Pleasant, 93 tons.

(b) *Brown Coal.*—(1) *General.* Deposits of brown coal and lignite of immense extent occur in gravels, sands, and clays of the Cainozoic period throughout Gippsland, Mornington Peninsula, Werribee Plains, Gellibrand, and Barwon and Moorabool basins. In the

Latrobe Valley, the beds reach a thickness of over 800 feet. When dried, the material makes good fuel, but owing to its excessive combustibility and friability requires to be consumed in specially constructed grates. Its steaming value is equal to about half that of the Wonthaggi coal. Some large factories already have adopted brown coal for firing boilers, and there is also a fair demand for the product by householders. In 1917 an Advisory Committee appointed to report on the brown coal deposits of Victoria recommended the establishment of an open-cut mine at Morwell in connexion with a comprehensive scheme of electrical power generation and transmission, as well as for the supply of brown coal for other requirements. The recommendations of this Committee were incorporated in the "Electricity Commissioners Act" of 1918. The Commission is actively engaged in the work of opening up the Morwell deposits, and the product will be utilized for the generation of electricity, which will be transferred to Melbourne and to other towns in Victoria within economic distance. The first generator at the Yallourn power station was brought into operation on the 15th June, 1924, and is now assisting in meeting the increasing demands for electric energy in the metropolitan area. A briquetting plant estimated to cost £400,000 has been put in hand, and the manufacture of briquettes on a commercial scale has been undertaken. The capacity of this plant will be about 350 tons per day. A township has been established at Yallourn, with provision for an ultimate population of 3,000. On the 30th June, 1924, there were 2,727 employees engaged on the various works of the Commission as follows:—At Yallourn, 1,686; Transmission Lines, 251; Metropolitan Works, 293; Water Power Investigation, 40; District Undertakings, 106; Brown Coal Mine (old open cut), 351. It is expected that the complete power station and plant will be in operation in 1925. Based on the results from boring, it has been estimated that 10,378 million tons of brown coal are available in the various beds, the bulk of it being in the Morwell and Traralgon areas, which each contain approximately 5,000 million tons. A recent estimate has, however, placed the total supplies at over 20,000 million tons.

The brown coal produced in Victoria is raised chiefly at the State Mine at Morwell, where the output in 1923 amounted to 115,045 tons. During the year 1,009 tons were also raised by the Otway Coal Co., at Bamba, and 834 tons by the Victorian Central Coal and Iron Co. at Lal Lal.

(2) *Production of Briquettes.* The Victorian production of briquettes amounts to about 108,000 tons a year which it is hoped to increase shortly to 300,000 tons, and ultimately to one million. According to the Report of the Geological Survey of the United States the world's production of briquettes in 1923 was $37\frac{1}{2}$ million tons, of which over 23 million tons were produced in Germany.

(iii) *Queensland.* The coal-bearing strata in Queensland are of vast extent and wide distribution, deposits being found in many portions of the Central and Southern Districts, and in a few localities in the Northern and Western Districts. On the south-eastern portion of the seaboard the mineral occurs over a length of 200 miles, whilst inland there is an uninterrupted stretch of coal measures extending over a distance of 600 miles. The geologically surveyed coal areas cover 73,000 square miles, of which 20,000 square miles are made up of recognized coal-fields, the balance consisting of lands known to contain coal but not yet sufficiently examined. Geologically the coal measures belong to the Mesozoic and Palaeozoic ages, the systems represented being the upper cretaceous (Desert Sandstone and Rolling Downs); Trias-Jura (Ipswich and Burrum), and Permo-Carboniferous (Tolmies, Clermont, Dawson, and Mackenzie). Most of the coal supplies are obtained from the Trias-Jura measures, the Cretaceous deposits being of minor importance. The inland Permo-Carboniferous areas have not been exploited to any great extent, and their greater development depends on the provision of railway facilities. It is stated that the actual coal reserves in Queensland amount to about 412 million tons, while the probable reserves are set down at over 2,201 millions. Hydrous coals occur at Callide, Hughenden, and Waterpark Creek; gas coals are well represented by the deposits at Walloon, Warwick, Waterpark, and Dalby; the best steam coals are found at Burrum, Ipswich, Styx River, and Clermont. The Ipswich and Burrum coals are well adapted for coke-making, as also are some of the coals from Styx River, Dalby, Warwick, and Clermont.

The distribution of production during the last three years was as follows:—

COAL PRODUCTION.—QUEENSLAND, 1921 TO 1923.

Districts.	1921.	1922.	1923.
	Tons.	Tons.	Tons.
Ipswich	666,236	579,184	607,983
Darling Downs	94,044	93,524	94,760
Wide Bay and Maryborough	69,633	79,305	74,215
Rockhampton (central)	30,719	68,075	108,890
Clermont	75,549	104,141	50,553
Bowen (State Coal Mine)	2,138	11,806	91,643
Mount Mulligan (Chillagoe)	16,444	22,484	32,618
Total	954,763	958,519	1,060,662

The production in 1923 was higher than the average for the preceding ten years, but was a little below that of 1920, the year of maximum output.

Operations were commenced at the State Coal Mine on the Bowen field in March, 1919. The coal is of excellent quality and is well suited for coking. With the completion of the railway to the field, it is anticipated that supplies of coke will be forwarded to the smelters at Chillagoe, Irvinebank, and Cloncurry, the coke for which has hitherto been obtained chiefly from New South Wales. The line was opened for traffic on the 24th August, 1922. Coal of excellent quality is raised from the State Coal Mine at Hartley (Styx River), in the Rockhampton division. This coal has been used with entirely satisfactory results on the ships of the Australian Navy. There are also State Coal Mines at Baralaba, in the Mount Morgan area, and at Mount Mulligan.

(iv) *South Australia.* Thin seams of black coal similar to the Jurassic coal of Victoria have been proved by a bore at Robe, but the depth at which the seams were located, i.e., between 2,830 feet and 3,950 feet, renders exploitation thereof unlikely. The seams of sub-bituminous coal at Kuntha Hill, 110 miles north of Marree, and at Lake Phillipson, are of good quality, but too far away from existing means of transport. At Leigh Creek there is a very large deposit, only partly explored, of sub-bituminous coal, but it is 170 miles distant from the nearest port. The chief hope for its utilization lies in its employment in pulverized form for railway purposes. At Noarlunga, 25 miles by rail from Adelaide, the proved lignite deposits contain 1,438,000 tons. The deposits at Moorlands, 87 miles by rail from the capital, contain an estimated quantity of 8,175,000 tons. At Clinton, 55 miles by sea from Port Adelaide, boring has proved the existence of 32,384,000 tons. Bores at Inkerman, 58 miles by rail from Adelaide, have revealed an estimated deposit of 10,701,000 tons. The mineral has also been located at Hope Valley, 8 miles by road from Adelaide, but no estimate has been made of tonnage. Altogether, the total reserves of lignitic fuel exceed 50 million tons, and further research will undoubtedly considerably increase this figure. South Australian lignite has a high sulphur content, and the effect of this constituent as regards the method of utilizing the deposits will need special investigation.

(v) *Western Australia.* The coal seams in Western Australia belong to the Carboniferous, Mesozoic, and Post-tertiary ages. Most of the coal contains a large proportion of moisture, and belongs partly to the hydrous bituminous and partly to the lignite class. The only coalfield at present worked is at Collie, in the Permo-Carboniferous beds. The area occupied by the coal measures is approximately 50 square miles, and the beds attain a thickness of over 2,000 feet, the coal seams totalling 137 feet. Two distinct types of coal, designated respectively the Proprietary and Collie Burn, have been recognized. The former is dull and porous, with a thinly-banded structure and much "mother of coal," and is characterized by a tendency to crumble on exposure, by its free burning, and lack of smoke. The Collie-Burn type is bright and compact, less laminated, almost free from mother of coal, clear and firm, and, while burning less freely, gives off an appreciable amount of smoke.

Estimates place the amount of available coal on the field to a depth not exceeding 2,000 feet at 3,500 million tons. About 5½ miles north-east of Wilga, on the Donnybrook-Preston Valley Railway, a deposit of coal occurs which appears to be an extension of the Collie fields. Its area, however, has not yet been determined, but boring is in progress and good seams have been located.

Beds of Permo-Carboniferous coal are found in the Irwin River area, and a seam believed to be a northern prolongation of the Irwin River measures has been located in the valley of the Greenough River. Coal has also been found at Fly Brook, one of the branches of the Donnelly River, on the South Coast, and in the neighbourhood of the Vasse River, which flows into Geographe Bay.

Other discoveries have been made at Millbrook on the Blackwood River, and in the valley of the Fitzroy River in the Kimberley area.

The production from the five collieries situated at Collie amounted in 1923 to 420,714 tons, as compared with 438,443 tons in 1922. If the demand for coal warranted it, the output from any of the collieries could be considerably increased.

(vi) *Tasmania*. The commercial value of the Tasmanian coals varies according to their age, the oldest, i.e., the Permo-Carboniferous, being of much greater value than the youngest, i.e., the Tertiary. At present there are not sufficient data available regarding the extent and distribution of the Tertiary deposits, although it is known that they occur in all quarters of the island, and that some of them contain workable seams. Both the Trias-Jura and Permo-Carboniferous coals are valuable for domestic purposes, but the Trias-Jura seams are thicker and more extensive, and hence more largely worked. Permo-Carboniferous coals have been mined for many years for domestic purposes at Mersey, and the Preolenna and Barn Bluff fields contain coals of high potential value. The total quantity of coal available for payable extraction has been estimated at approximately 135 million tons, or on the basis laid down by the International Geological Congress, 125 million tons actual reserve, and 123 millions probable reserve.

Of the total output in 1923, amounting to 80,718 tons, the Cornwall and Mt. Nicholas Collieries in the North-eastern Division raised 43,068 and 32,457 tons respectively. About 1,800 tons were produced from the Catamaran Colliery; 1,200 tons from the Cardiff-Jubilee Colliery, and smaller quantities from Spreyton, York Plains, Illamatha, Preolenna and Allison.

3. **Production in Various Countries.**—The total known coal production of the world in 1923 amounted to about 1,197 million tons, towards which Australia contributed over 12½ million tons, or about 1 per cent. The following table shows the production of the British Empire and the chief foreign countries in units of 1,000 tons during each of the five years from 1919 to 1923 where the returns are available. The figures for the British Empire and the United States have been extracted chiefly from the official publications of the various countries, while those for other countries are taken from the Official Monthly Bulletin of Statistics, published by the League of Nations. The production of lignite is included in those countries in which it is raised :—

COAL PRODUCTION.—BRITISH EMPIRE, 1919 TO 1923.

Year.	United Kingdom.	British India.	Canada.	Australia.	New Zealand.	Union of S. Africa.
	1,000 tons.	1,000 tons.	1,000 tons.	1,000 tons.	1,000 tons.	1,000 tons.
1919	229,800	22,600	12,200	10,500	1,848	9,200
1920	229,500	17,100	14,400	12,800	1,844	10,200
1921	163,200	18,400	10,500	12,800	1,809	10,200
1922	249,600	18,200	10,000	12,200	1,858	8,700
1923	276,900	18,800	16,984	12,600	1,970	10,700

COAL PRODUCTION.—FOREIGN COUNTRIES, 1919 TO 1923.

Year.	Germany.	Belgium.	France.	Czecho-Slovakia.	Poland.	Netherlands.	Japan.	United States.
	1,000 tons.	1,000 tons.	1,000 tons.	1,000 tons.	1,000 tons.	1,000 tons.	1,000 tons.	1,000 tons.
1919	207,100	18,200	21,500	27,000	27,000	3,400	30,800	494,600
1920	215,900	22,000	34,100	30,300	30,547	3,900	28,800	577,700
1921	235,100	21,400	37,900	32,600	29,343	3,900	25,800	452,100
1922	252,100	20,000	42,500	28,400	34,267	4,500	27,200	425,800
1923	177,600	22,600	47,000	27,400	35,518	5,200	26,000	572,100

More than half the production in Germany and Czecho-Slovakia was represented by lignite. As a result of the conditions of the Versailles Treaty, Germany has been transformed temporarily from a bituminous coal producing country into one mainly turning out lignite. So far as Central Germany is concerned, the production of lignite increased from 35 million tons in 1913-14 to about 60 millions in 1922-23, more than half the output being converted into briquettes.

4. Exports.—The exports of coal from Australia are chiefly confined to New South Wales.

The total quantity of coal of Australian production (exclusive of bunker coal) exported to other countries in 1923-4 was 1,336,489 tons, valued at £1,460,168, all of which, with the exception of 6 tons, was exported from New South Wales.

In the following table will be found the quantity and value of the exports from New South Wales, during the last five years. The figures are given on the authority of the Mines Department of that State, and include both bunker coal and coal exported from New South Wales to other States.

COAL.—EXPORTS, NEW SOUTH WALES, 1919 TO 1923.

Year	1919.	1920.	1921.	1922.	1923.
Quantity, 1,000 tons	3,504	4,987	5,525	5,239	4,900
Value, £1,000	2,919	4,591	5,794	5,929	5,481

Arranged in order of importance the principal oversea countries to which coal was exported from New South Wales during the year 1923-24 are as shown hereunder. The quantity and value refer strictly to exports, and exclude bunker coal:—

COAL.—DESTINATION OF OVERSEA EXPORTS, NEW SOUTH WALES, 1923-24.

Country.	Quantity.	Value.	Country.	Quantity.	Value.
	Tons.	£		Tons.	£
New Zealand ..	731,393	803,152	Fiji	20,528	21,207
Philippine Islands	143,199	160,088	India	10,558	10,985
Chile	117,147	124,225	Society Islands ..	7,771	8,185
Netherlands East Indies ..	93,500	101,369	Ceylon	7,000	7,875
Malaya (British) ..	71,976	76,913	Gilbert and Ellice Islands ..	7,657	7,543
Peru	36,120	40,106	New Guinea ..	5,932	7,351
United States ..	34,091	37,627	Nauru	3,754	3,468
New Caledonia ..	21,811	23,625	Egypt	1,133	1,133
Hawaiian Islands	21,681	23,332			

The quantity of bunker coal taken from Australia by oversea vessels in 1923-24 was about 1,276,000 tons, of which 1,148,000 tons were supplied by New South Wales.

The distribution of the total output from New South Wales collieries during the last five years was as follows, the particulars given of quantity exported including coal shipped as bunker coal:—

COAL.—DISTRIBUTION OF OUTPUT, NEW SOUTH WALES, 1919 TO 1923.

Year.	Exports to Australian Ports.	Exports to Foreign Ports.	Local Consumption.	Total.
	Tons.	Tons.	Tons.	Tons.
1919	1,891,317	1,611,701	5,128,536	8,631,554
1920	2,270,556	2,716,235	5,729,208	10,715,999
1921	2,752,810	2,771,949	5,268,628	10,793,387
1922	2,841,253	2,398,144	4,943,736	10,183,133
1923	2,518,579	2,381,549	5,578,385	10,478,513

Of the total coal exports from New South Wales, amounting in 1923 to 5,578,000 tons, about 4,042,000 tons were shipped from the port of Newcastle.

The figures quoted above are given on the authority of the New South Wales Mines Department.

5. Consumption in Australia.—An estimate of the consumption of coal in Australia may be arrived at by adding the imports to the home production, and deducting the exports (including bunker coal taken by oversea vessels). The following table shows the consumption computed in the manner specified, for the last five years:—

COAL.—CONSUMPTION, AUSTRALIA, 1919 TO 1923.

Year.	Quantity of Coal Consumed.		
	Home Produce.	Produce of Other Countries.	Total.
	Tons.	Tons.	Tons.
1919	9,036,623	64,673	9,101,296
1920	10,132,442	26,828	10,159,270
1921	9,776,978	9,457	9,786,435
1922	9,531,274	46,620	9,577,894
1923	10,022,228	62,660	10,084,888

The bunker coal taken away in 1923 was estimated at 1,276,000 tons.

6. Prices.—(i) *New South Wales*. The price of New South Wales coal depends on the district from which it is obtained, the northern (Newcastle) coal always realizing a much higher rate than the southern or western product. The average rate in each district during the last five years was as follows:—

COAL.—PRICES, NEW SOUTH WALES, 1919 TO 1923.

Year.	Northern District.	Southern District.	Western District.
	Per ton. s. d.	Per ton. s. d.	Per ton. s. d.
1919	13 6	11 10	9 4
1920	15 3	13 4	11 8
1921	17 7	16 6	12 10
1922	17 6	16 3	12 8
1923	17 7	16 1	11 5

(ii) *Victoria*. In Victoria the average price of coal in 1918 was 15s. 11d.; in 1919, 17s. 7d., in 1920, 21s.; in 1921, 23s. 5d.; in 1922, 23s. 9d.; and in 1923, 22s. per ton. These averages are exclusive of brown coal, the production of which in 1923 was valued at 6s. 6d. per ton.

(iii) *Queensland*. Prices in the principal coal-producing districts during the last five years were as follows:—

COAL.—PRICES, QUEENSLAND, 1919 TO 1923.

District.	Value at Pit's Mouth.				
	1919.	1920.	1921.	1922.	1923.
	Per ton. s. d.	Per ton. s. d.	Per ton. s. d.	Per ton. s. d.	Per ton. s. d.
Ipswich	12 7	14 7	16 6	16 8	16 11
Darling Downs	14 10	16 7	18 10	18 11	19 1
Wide Bay and Maryborough	19 2	23 3	27 3	27 2	25 0
Rockhampton	13 4	16 1	15 6	16 5	15 5
Clermont	11 2	13 0	14 4	13 10	12 10
Bowen (State Coal Mine)	15 0	15 10	16 3	16 1	16 0
Mount Mulligan (Chillagoe)	17 8	19 0	19 10	20 0	22 6
Average for State	13 2	15 2	17 5	17 6	17 5

The readjustment of prices and wages in the industry was responsible for the increases in the averages during the last four years.

(iv) *Western Australia.* The average price of the Collie (Western Australia) coal during the last five years was as follows:—In 1919, 13s. 5d.; in 1920, 15s. 2d.; in 1921, 17s. 4d.; in 1922, 17s. 5d.; and in 1923, 17s. 6d. per ton.

(v) *Tasmania.* The average price per ton of coal at the pit's mouth in Tasmania for the five years 1918 to 1922 was:—In 1918, 12s. 6d.; in 1919, 14s. 2d.; in 1920, 16s. 11½d.; in 1921, 19s. 1d.; in 1922, 17s. 7d.; and in 1923, 17s. 6d. per ton.

7. *Prices in the United Kingdom.*—During the five years 1918 to 1922 the average value of coal at the pit's mouth in the United Kingdom was:—In 1918, 20s. 11d.; in 1919, 27s. 4d.; in 1920, 34s. 7d.; in 1921, 26s. 2d.; and in 1922, 17s. 7d. per ton.

8. *Employment and Accidents in Coal Mining.*—The number of persons employed in coal mining in each of the States during the year 1923 is shown below. The table also gives the number of persons killed and injured, with the proportion per 1,000 employed, while further columns are added showing the quantity of coal raised for each person killed and injured, this being a factor which must be reckoned with in any consideration of the degree of risk attending mining operations. A further table gives the rate of fatalities during the last five years.

According to the report of the Chief Inspector of Mines for Great Britain, the average death-rate per 1,000 miners from accidents in coal mines during the quinquennium 1915–19 was 1.27, while, as shown in the table following, the rate for Australia for the quinquennium 1918–1922, was 1.57. In the United States the fatality rate per 1,000 employees, as stated in "The Mineral Industry," was 3.94 in 1918, 4.39 in 1919, and 3.63 in 1920.

COAL MINING.—EMPLOYMENT AND ACCIDENTS, 1923.

State.	Persons Employed in Coal Mining.	No. of Persons.		Proportion per 1,000 Employed.		Tons of Coal Raised for each Person.	
		Killed.	Injured.	Killed.	Injured.	Killed.	Injured.
New South Wales ..	22,989	31	101	1.35	4.39	338,000	103,700
Victoria ..	2,131	1	11	0.47	5.16	594,000	54,000
Queensland ..	2,662	2	11	0.75	4.13	530,000	96,400
Western Australia ..	713	..	62	0.00	86.96	..	6,800
Tasmania ..	318	1	3	3.14	9.43	81,000	26,900
Total ..	28,813	35	188	1.21	6.52	361,000	67,200

The figures for New South Wales include 20 shale miners, of whom one was injured. In 1922 the deaths from accidents in coal mines in this State numbered 12, the increase in 1923 being due to the disaster at the Bellbird colliery which caused the death of 21 persons. Owing to lack of uniformity in the definition of "injury," the figures relating to persons injured possess little value.

The next table shows the average number of miners employed, the number of fatalities, and the rate per 1,000 during the quinquennium 1919–23:—

COAL MINING.—FATALITIES, 1919 TO 1923.

State.	Average No. of Coal Miners.	Average No. of Fatal Accidents.	Rate per 1,000 Employed.
New South Wales ..	20,806	19.8	0.95
Victoria ..	2,058	2.4	1.17
Queensland ..	2,476	19.0	7.67
South Australia ..	4	..	..
Western Australia ..	777	0.6	0.77
Tasmania ..	241	0.2	0.83
Total ..	26,362	42.0	1.59

Figures for coal miners in South Australia appear for the first time in 1922, the miners being engaged chiefly on work in connexion with the brown coal deposits.

The abnormally heavy rate in Queensland is due to the inclusion of the 75 deaths in 1921 caused by the disastrous explosion of coal-dust at Mount Mulligan. For the quinquennium 1916-20 the Queensland rate was 1.79, and for the whole of Australia 1.14.

§ 11. Coke.

1. *Production.*—Notwithstanding the large deposits of excellent coal in Australia there was, prior to the war, a fairly considerable amount of coke imported from abroad. During recent years, however, a high standard of excellence has been attained in the local product, and the necessity for import has therefore disappeared. The table hereunder gives the production in New South Wales during the last five years:—

COKE.—PRODUCTION, NEW SOUTH WALES, 1919 TO 1923.

Year	..	..	..	1919.	1920.	1921.	1922.	1923.
Quantity	..	tons		424,773	567,569	592,097	240,229	580,374
Value, total	..	£		550,127	844,191	1,029,694	382,926	941,323
Value, per ton	..	..		25s. 11d.	29s. 9d.	34s. 9d.	31s. 10d.	32s. 5d.

During recent years the industry has made considerable progress, and with the development of local iron and steel works, as well as metal refineries and smelting establishments, its future prospects ought to be assured. The heavy decline in quantity and value of coke made in 1922 was due to the lessened demand consequent on the closing down of the steel works at Newcastle, while the improvement manifested in 1923 was resultant on the recommencement of operations.

A small quantity of coke is made in Queensland, the quantity returned in 1923 being 5,244 tons, but the bulk of that used in ore reduction is imported, mainly from New South Wales. The following table shows the amount manufactured locally during the last five years:—

COKE.—PRODUCTION, QUEENSLAND, 1919 TO 1923.

Year	..	..	..	1919.	1920.	1921.	1922.	1923.
Quantity	..	tons		4,562	19,653	7,557	6,748	5,244

Information regarding the exact quantity of coke imported from New South Wales and elsewhere is not available.

In order to avoid duplication with coal values the returns for coke have not been included in the general tables of mineral production in the early part of this chapter.

§ 12. Oil Shale and Mineral Oil.

1. *Production.*—(i) *New South Wales.* The production of kerosene shale amounted during 1923 to 1,207 tons, valued at £2,831, as compared with 23,467 tons valued at £60,641 in 1922, the reduction being due to the closing down of the shale mines at Newnes. Up to date there has been no production of petroleum in the State, but boring operations were continued in the Tamworth division, and several areas have been taken up for the purpose of boring in the Picton division. It is estimated that the total quantity of shale in the State amounts to 40 million tons, but its profitable exploitation depends on economic methods of distillation and transportation.

(ii) *Victoria.* Up to the present no extensive deposit of oil shale has been located in Victoria. Bores in search of oil have been put down from time to time, but so far without result, and the State geological authorities take an unfavourable view of the prospects of obtaining it.

(iii) *Queensland.* The discovery of natural gas and traces of oil in a deep bore at Roma fostered the hope that energetic development would lead to the discovery of mineral oil in quantity in this locality. During 1919 the bore reached a depth of 3,705 feet, but further drilling operations were suspended owing to the tools getting fast in the bore early in the year. In February, 1920, a start was made with the work of attempting to recover the tools, but after using various devices without success the task was abandoned. Later, the bore was diverted, and in 1922 this work was continued to a depth of 2,800 feet. Strong evidences of oil were noticed on the water flowing from the bore, but attempts to shut off this water proved unsuccessful, and operations were terminated. Attempts made at the recovery of the petroliferous gas were also unsuccessful. Early in 1924 it was announced that oil-bearing sands has been penetrated between 2117 ft. and 2233 ft. by a bore put down on the Lander Oil Co.'s area at Orallo, near Roma. It is believed that the main body of the oil sands will be located at approximately 4000 ft. Oil-bearing shales are common in many parts of the State, but their extent and nature have not yet been accurately determined. Prospecting for petroleum is still being vigorously conducted at Orallo, and at Tewantin and Beaudesert. A well-known geologist states that one of the causes of the delay in the discovery of petroleum is the absence of signs which would strike the eye of the bushworker. In Queensland, the difficulties in the way of oil prospecting were the soil mantle, and the underlying cretaceous-tertiary which obscured the earth structure in the underlying beds. Bores in the vicinity of Longreach have yielded petroliferous gas and wax, and there seems to be evidence that the Mesozoic strata are oil-bearing.

(iv) *South Australia.* Bitumen is occasionally washed up on the southern coasts of the continent from Port Davey in Tasmania to Cape Leeuwin in Western Australia. Specimens found on Kangaroo Island at one time led to the belief that they were the product of a terrestrial petroliferous area. Similar occurrences of this mineral have been reported from the coasts of California, South Africa, and New Zealand. In 1920 the finding of accumulations of oily matter on the shores at Encounter Bay and Kangaroo Island was reported, but investigations by the Mines Department into the geological conditions of the surrounding country do not encourage the hope that the matter is of local origin. It is stated, however, that the prospects appear favourable over an area in the desert region near Lake Eyre, and in the Coorong district.

(v) *Western Australia.* In this State the chief interest in the search for oil centres in the Kimberley division. At Mount Wynne, in West Kimberley, the gas which bubbles freely in a hot spring has been found to contain hydrocarbons. Indications of free petroleum have been obtained in bores on Price's Creek, about 100 miles south-east of Mount Wynne, and traces of mineral oil have been detected in a seepage. In East Kimberley a black bitumen, residual from an asphaltic oil, has been found in weathered basalt in two localities five miles apart, thus indicating the former circulation of petroleum in the area. Boring operations were in progress during 1923 in the Kimberley area, and several other areas are being geologically examined to determine whether boring is justified.

(vi) *Tasmania.* Oil shale has been discovered in the basins of the Mersey, Don, and Minnow Rivers, and elsewhere, and the Government Geologist estimates the probable capacity of the beds at 12,000,000 tons. Production during the last ten years has, however, been small, the largest yield being in 1916, when 1,286 tons were raised. For 1923 the output was 1,101 tons, valued at £1,094. During the year 1920 an investigation was made of the oil-shale deposits in the North-Western Division. Previously the known occurrences were restricted to small areas near Latrobe, Railton, Nook and Beulah, but it has been proved that the deposits extend over a much larger area in that district, and another field has been discovered near Henrietta. A new method of extracting oil from shale has been successfully tried, and a company has been formed to exploit the process.

(vii) *Northern Territory.* Considerable activity has recently been displayed by speculators in acquiring areas under coal and oil prospecting licences along the north-western boundary of the Territory, and northerly along the western coast to the Daly River, but so far no developments have been recorded, although what are regarded locally as good indications of oil have been discovered.

(viii) *Papua*. In 1911 indications of petroleum were reported near the Vailala River, and, acting on the reports of geologists, an oil-expert was despatched by the Commonwealth Government to sink trial bores on the site. Early in 1913 a small quantity of oil was obtained from a shallow bore. Later on, extensive geological surveys were made of the country between Yule Island and the Purari Delta, and oil was encountered in several trial bores. In 1919 the Anglo-Persian Oil Co., under agreement with the British and Commonwealth Governments, and latterly with the Commonwealth Government only, has been engaged in work on the field. A geological survey and examination has been made of the Papuan Gulf Coast north-west from Yule Island to the Kapuri River district, and a re-examination of areas in the Vailala River area.

(ix) *New Guinea*. At Matapau, about 54 miles from Aitape on the north coast of what was formerly German New Guinea, oil has been struck in a shallow bore, and hopes are entertained that the product will be encountered in large volume at a greater depth.

2. *Expert's Report*.—A report by Dr. Wade presented to the Senate in October, 1924, by the Minister for Home and Territories was generally unfavourable to the prospects of finding commercial supplies of petroleum in the northern portions of Western Australia and the Northern Territory. The report points out that the marginal areas on the Fitzroy apparently offered the best possibilities, and special mention was made of the Price's Creek region, although the structure there was not satisfactory in regard to present geological knowledge. It was recommended that the district should be tested with boring plant capable of penetrating to a depth of between 3,000 and 4,000 feet.

3. *Exports*.—In 1916–17 New South Wales exported a small quantity of shale. There was no export in the succeeding year. In 1919, 5 tons, valued at £21, were exported, in 1920, Victoria was credited with an export of 4 tons, and in 1921, New South Wales exported 103 tons, valued at £440. There was no record of export in 1922, and 11 tons only were exported from New South Wales in 1923.

4. *Mineral Oil Bounties*.—A statement regarding the bounties payable in respect to the discovery of oil was given in Official Year Book 17, p. 805. The offer by the Commonwealth Government of a reward up to £50,000 for the discovery of oil in Australia was withdrawn in 1925, and it is now proposed to subsidize boring on a £ for £ basis in localities where geological evidence offers reasonable prospects for the discovery of oil. Separate arrangements have been made in regard to the mandated territories.

§ 13. Other Non-metallic Minerals.

1. *Alunite*.—The production of this mineral in New South Wales amounted during 1923 to 998 tons, valued at £3,992, raised in the Bullahdelah division. The mineral is sent to England for treatment, and, to the end of 1923, the exports were 56,000 tons, valued at £200,000.

In South Australia an extensive deposit of the mineral was located in 1913 at Carrickalinga Head, on the coast north of Normanville, and within a short distance of Adelaide. Fresh discoveries were later reported on the western shores of St. Vincent's Gulf. The mineral returns show a production of 95 tons in 1922, but none was recorded in 1923.

The exploitation of the alunite deposits in the North-East Coolgardie field in Western Australia has been retarded pending the result of field experiments to determine the suitability or otherwise of the product as a fertilizer in its unroasted state. Deposits of the mineral are also found in the Kalgoorlie area.

2. *Asbestos*.—This substance has been found in various parts of Australia, but up to the present has not been produced in any considerable quantity. In New South Wales 204 tons of fibre, valued at £4,267, were raised during 1923 from deposits in the Barraba division. In Queensland seams of asbestos have been found over a belt of country extending from Cawarral to Canoona, as well as in other districts. Samples of the fibre proved suitable for the manufacture of fibro-cement sheeting and tiles, but so far the deposits have not been commercially exploited. Deposits of asbestos have been located at various places in South Australia. Production in 1923 amounted to

147 cwt., valued at £161. Chrysotile asbestos of high grade is found in various localities in Western Australia, particularly in the Serpentine rocks between Nullagine and Roeburne, over a distance of 200 miles. The production in 1923 amounted to 115 tons valued at £4,032, obtained in the Nullagine and Marble Bar districts of the Pilbara Goldfield. In 1899 Tasmania raised 200 tons, valued at £363, but there was no further production until 1916, when a small quantity was raised at Anderson's Creek, near Beaconsfield. In 1917, 271 tons, valued at £271; in 1918, 2,854 tons, valued at £5,008, and in 1919, 51 tons, valued at £1,275, were produced, but there was no subsequent record of production.

3. **Barytes.**—In New South Wales during 1921 about 200 tons of barytes, valued at £600, were obtained at Mandurama in the Cowra division. A promising deposit of remarkable purity was further developed during the year at Cavan in the Yass division, and a large deposit was opened up at Kempfield in the Trunkey division. No production was, however, reported for 1922, and 100 tons only, valued at £200, were raised in 1923. The production in South Australia during 1923 was given as 1,761 tons, valued at £5,265. In this State there are extensive deposits of the mineral at Noarlunga and Pernatty Lagoon. First class ore is found near Truro in the hundred of Dutton, and the mineral is also worked near Williamstown. High grade natural white barytes is obtained from some of the workings, but a large amount of lower grade ore is discarded or wasted owing to lack of facilities for cleaning and bleaching. Barytes in fair-sized veins occurs at many places in Western Australia, especially at Cranbrook in the south-west division. The export in 1921 was, however, small, being valued at under £20 and none was recorded in 1923. About 1,000 tons of barytes, valued at £4,000, were produced in Tasmania in 1920, the greater portion being won from deposits near Queenstown and Mt. Jukes, and the balance from Beulah and elsewhere, but there was no production recorded in the last three years.

4. **Clays and Pigments.**—Valuable deposits of clays and pigments of various sorts are found throughout Australia. There is a considerable local production of earthenware, bricks, and tiles, but the finer clays have not as yet been extensively used. In New South Wales the production of pigments amounted in 1923 to 190 tons, valued at £351. About 100 tons of yellow ochre were raised at Eumungerie in the Dubbo division, and small quantities of red ochre and umber were raised in the Gulgong division. About 3,600 tons of white clay were raised from various areas during the year, the deposits at Lidsdale in the Lithgow division being found very suitable for the making of high grade porcelain ware. The output of silica was approximately 19,000 tons, raised chiefly at Lithgow, Ulladulla, and Milton. In Victoria 2,307 tons of kaolin, valued at £2,384, were produced in 1923 from deposits at Stawell, Mt. Egerton, Bendigo, and Pyalong, and 123 tons of pigment clays, valued at £635, were raised from leases at Ballarat and Warragul. In Queensland, 7,399 tons of fireclay, valued at £1,942, were mined during 1923 in the Mount Morgan district. Deposits of fine white clay have been located near Wondai and Kingaroy. On Kangaroo Island, South Australia, where, it is stated, the first pottery mill in Australia was erected, there are vast deposits of felspar, china stone, silica, and firebrick clay. There are also very extensive deposits of fireclay near Ardrossan on the Yorke Peninsula. Ochre deposits of fine quality are found in the Noarlunga area, and a company in this area is producing kaolin, firebricks, and kalsomines. Production of ochre in 1923 amounted to 52 tons, valued at £155. Red oxide of suitable quality as well as ochres of various hues have been found in different and widely-separated localities in Western Australia. A paint and distemper factory has been established in Perth, and this, coupled with the demand from the Eastern States, will further stimulate the search for the necessary materials. Investigation has proved the existence of a deposit of a fine white-ware clay about 4 miles from the railway at Wagin. Porcelain and other clays of good quality have been found in Tasmania at Beaconsfield, Sorrell, Hagley, etc. Oil and water paints have been made from coloured ochres from Sorrell, and deposits of ochre have been located near Mowbray and Beaconsfield. The production of ochre in 1921 was returned at 15 tons, valued at £56, but none was recorded in 1922 and 1923.

5. **Felspar.**—During 1923, the production of this mineral in New South Wales was 13 tons, valued at £27, raised in the Bathurst division. About 60 tons of felspar, valued at £485, were exported during 1922 from Western Australia, but none was recorded in

1923. A large deposit of the mineral has been located near Jacob's Siding, and it also occurs in the Coolgardie area.

6. **Fluorspar.**—At Carboona in the Tumbarumba division in New South Wales this mineral is mined with silver and lead, but no production was recorded therefrom in 1923. In Victoria 196 tons, valued at £625, were raised in 1921 by a company operating at Walwa, but none was recorded in 1923. A company operating in 1921 at a mine near Emuford in the Herberton district in Queensland produced 536 tons, valued at £1,609, but no production was returned for 1922 or 1923. A high grade fluorspar occurs at the Perseverance mine on the Chillagoe railway, and large quantities can be cheaply mined at shallow depths.

7. **Fuller's Earth.**—About 50 tons of this material, valued at £90, were produced in 1923 from deposits in the Boggabri area of the Narrabri division, New South Wales. A large deposit of excellent quality has been located near Jennacubbine in Western Australia.

8. **Graphite.**—Graphite is found in New South Wales near Undercliff Station, in the county of Buller, and 50 tons were raised during 1922. The product was used in the manufacture of paints, boiler compound, and foundry plumbago, but none was raised in 1923. In Victoria the mineral occurs in Ordovician slates in several of the gold-fields, but is not worked. In Queensland graphite was raised some years ago by the Graphite Plumbago Company at Mt. Bopple, near Netherby, on the Maryborough-Gympie line. There has been no production in recent years, and it is stated that the prospects are not promising for flake graphite, although encouraging for the amorphous variety. In South Australia deposits are found at various places in Eyre's Peninsula. While a large proportion of the product is not suitable for commercial use, the work so far done shows that flake graphite containing as high as 80 per cent. carbon can be obtained. The Government is offering a bonus of £1 per ton for the production of graphite containing not less than 80 per cent. carbon, and on graphite with a smaller percentage, a bonus proportionate to the carbon content. In Western Australia deposits occur at Munglinup Creek, near the Oldfield River, on the Pallinup River in the Kent District, at Northampton, in the Murchison division, and on the Donnelly River at Kendenup, about 40 miles from Albany. Production in 1920 was small, amounting to 13 tons, valued at £130, and practically none was recorded during the last three years.

9. **Gypsum.**—The output of gypsum in New South Wales during 1923 was 2,070 tons, valued at £360, and was obtained in the Hillston division. In Victoria during 1923 there was a production of 12,761 tons, valued at £10,176, of which 969 tons were raised from leases at Boort, Lascelles, and Chillingollah; 1,232 tons at Cowangie; 5,069 tons at Waitchie; 2,568 tons at Bolton; and 2,923 tons at Lake Boga. Numerous deposits of gypsum are found in Southern Yorke's Peninsula, and on the coast near Fowler's Bay, in South Australia, the quantity available being large and of high quality. The production in 1923 amounted to 53,405 tons, valued at £46,729, the largest yet recorded. Considerable impetus will be given to the industry with the completion of railway communication between the deposits at Lake Macdonnell and the works at Cape Thevenard. Gypsum is widely distributed in Western Australia in tertiary and late tertiary deposits associated chiefly with the salt lakes of the arid regions of the interior south of the tropics. Many of these lacustrine deposits are capable of yielding large tonnages. The production in 1921 amounted to 664 tons, obtained at Koorda. In 1922 only 63 tons were recorded, and none was raised in 1923.

10. **Magnesite.**—Deposits of this mineral have been discovered at several localities in New South Wales. During 1923 the output was 6,130 tons, valued at £5,699, of which about 4,620 tons were raised at Attunga in the Tamworth division, and 1,190 tons in the Fifield division. In addition, 360 tons were raised in the Cobar division, but there was no production from the deposits in the Bingara and Braidwood areas. The mineral is found at Heathcote in Victoria, where 75 tons, valued at £225, were produced in 1923. There are deposits in the neighbourhood of Rockhampton and Bowen in Queensland, and a deposit of exceptional purity has been located in the vicinity of Tumby Bay in South Australia, about five miles

from the township of Tumby. The cost of transport is a drawback to the production from the Copley (Leigh Creek) district. The Broken Hill Co. is working a small deposit near the Beetaloo Waterworks. Production in 1923 amounted to 165 tons, valued at £323. A large area of magnesite-bearing country has been located in Western Australia at Bulong, about 20 miles east of Kalgoorlie, and deposits have also been found at Coolgardie and other places. The mineral is of a high degree of purity, but there has been no production of importance since 1915, and 2 tons only were recorded in 1923.

11. Phosphate Rock.—During 1923, 34 tons of phosphate, valued at £112, were obtained in New South Wales at Ashford, and about 40 tons were won in the Molong division. In Victoria 480 tons, valued at £713, were raised at Mansfield. The production in Queensland amounted in 1922 to 65 tons valued at £279, raised by the Holbourne Island Phosphate Company in the Bowen district. Difficulty in finding a market for the product was responsible for the small output, and none was raised in 1923. South Australia possesses deposits scattered over a belt of country 200 miles in length, from Myponga in the south to the district round Carrieton, in the north. Production in 1921 amounted to 5,079 tons, valued at £6,203, in 1922 to 2,715 tons, valued at £3,678, but in 1923 there was a decline to 446 tons, valued at £592. It is stated that the industry is meeting with severe competition in the high grade phosphate imported from Nauru. Deposits of guano and phosphate have been found in caves between 27 and 40 miles to the north-east of Carrieton, but they are not of sufficient value to warrant exploitation. In Western Australia the known phosphate deposits occur principally on the coastal islands, and in portion of the coastal plain between Dongarra and Perth. Some years ago guano digging on the islands was a large and profitable industry.

12. Salt.—Salt is obtained from salt lakes in the Western and North-western districts of Victoria, and from salterns in the neighbourhood of Geelong. Figures regarding production are, however, not available for publication. Large quantities are obtained from the shallow salt lakes of South Australia, chiefly on Yorke Peninsula. Lake Hart, about 60 square miles in area, situated about 120 miles N.W. from Port Augusta, contains immense supplies of salt of good quality, which at present, however, owing to distance from market, possess no economic value. The salt is simply scraped from the beds of the lakes in summer time and carted to the refinery. It is stated that care must be taken not to leave too thin a crust of salt over the underlying mud, as the resultant "crop" after the winter rains will in that case be smaller than usual. During recent years a fair amount has been produced by evaporation of sea water at the heads of Spencer's and St. Vincent's Gulfs. About 50,000 tons of crude salt, valued at £113,000, were produced during 1923. In Western Australia salt is obtained from depressions in the calcareous sandstones of the coast, which are filled to a shallow depth in winter with salt water. In summer the depressions dry up, leaving a layer of salt two or three inches thick, which is collected and refined. Up to the present, the four chief localities producing salt were Rottneest Island, off Fremantle; Middle Island, near Esperance; Yarra Yarra Lakes, near Three Springs; and Lynton, near Port Gregory. There is a very large number of salt and brine lakes which may ultimately be used as sources of salt.

Attention has recently been devoted to the occurrence of salt in Queensland, more especially to the deposits in the vicinity of the Mulligan River.

13. Diatomaceous Earth.—Although this mineral has been found at various localities in New South Wales, the deposits have not been worked commercially on any considerable scale. The output in 1923 was 515 tons, valued at £1,098, of which 327 tons were raised in the Coonabarabran division, 40 tons in the Cooma division, 147 tons in the Barraba division, and a small quantity in the Lismore division. Part of the product was used as a filtering medium in the manufacture of gelatine, and part for the manufacture of metal polish in powdered and liquid form. In Victoria there is a remarkably pure deposit at Lillicur, near Talbot, while beds of the mineral are also met with at other places in the Loddon Valley, near Ballarat, at various places close to Melbourne, at Craigieburn, Lancefield, Portland, Swan Hill, Bacchus Marsh, etc. During 1920, a production of 1,000 tons, valued at £5,000, was recorded, but no production was returned for 1921 to 1923. Fairly extensive deposits of diatomite exist in Queensland, in the Nerang, Beaudesert and Canungar areas, but the various

outcrops have as yet been only partly examined. In Tasmania a deposit of diatomaceous earth has been located at Oatlands, but its use for the manufacture of explosives is apparently prejudiced by the circumstance that the diatoms are pulverized and contaminated with clay.

§ 14. Gems and Gemstones.

1. **Diamonds.**—It is difficult to secure accurate returns in connexion with the production of precious stones, but the yield of diamonds in 1923 in New South Wales was estimated at 175 carats, valued at £230, while the total production to the end of 1923 is given at 202,000 carats, valued at £144,000. The yield in 1923 was obtained at Copeton in the Tingha division. Small quantities of diamonds are found in Victoria in the gravels of streams running through granite country in the Beechworth district, at Kongbool in the Western District, and near Benalla. The stones are generally small, and the production up to date has been trifling. In 1912, eleven small diamonds, valued at £20, were picked out of the sluice boxes of the Great Southern alluvial mine at Rutherglen. A few small diamonds have been found in the Pilbara district in Western Australia. In South Australia diamonds have been found on the Echunga goldfield, the most notable gem being Glover's diamond, which was sold for £70. A few small diamonds have, from time to time, been found in Tasmania, chiefly while sluicing for gold in the Donaldson district.

2. **Sapphires.**—The production of sapphires in New South Wales during 1923 was returned as 1,034 ozs., valued at £3,282, obtained in the Inverell division. A fair quantity of machine stones, zircon and corundum, was also raised, but no sales thereof were effected.

In Queensland, sapphires to the value of £23,309 were obtained in 1923 on the Anakie mineral field. Owing to the unsatisfactory condition of the market, the Government in 1923 continued to afford relief to the miners by making advances up to 95 per cent. of the value of the gems won, and by arranging for the disposal of the more valuable stones overseas. An expert was appointed to take charge of the marketing of the gems in London and on the Continent. Fancy stones occasionally bring high prices, and a yellow sapphire weighing 6½ dwt. found at Iguana Flat was purchased for £100. There is a lapidary on the Anakie field, but many stones are sent away for cutting.

Sapphires are plentifully found in the tin drifts of the Ringarooma and Portland districts in Tasmania, but the stones are, as a rule, small and not worth saving.

3. **Precious Opal.**—The estimated value of the opal won in New South Wales during the year 1923 was £3,040, compared with £15,150 in the preceding year. Practically the whole of the yield came from the Lightning Ridge field, near Walgett, only £40 worth being won at White Cliffs. Operations during 1923 were greatly hampered by the prevailing dry weather. Some very fine stones are at times obtained, one weighing 5 ozs. and valued at £300 being recovered in 1911. Occasionally, black opals of very fine quality are found, one specimen from the Wallangulla field, weighing 6½ carats, being sold in 1910 for £102, while in the early part of 1920 a specimen realized £600. It is stated that this locality is the only place in the world where the "black" variety of the gem has been found. The total value of opal won in New South Wales since the year 1890 is estimated at £1,529,000.

Small quantities of precious opal are found in the Beechworth district in Victoria.

The opaliferous district in Queensland stretches over a considerable area of the western interior of the State, from Kynuna and Opalton as far down as Cunnamulla. The yield in 1923 was estimated at £500, and up to the end of that year at about £181,000. These figures are, however, merely approximations, as large quantities of opal, of which no record is obtained, are disposed of privately. At present the industry, which is not followed by practical miners, suffers from the peculiar disability that in good seasons there is plenty of work available on the pastoral stations, and most men prefer this to the uncertain results obtainable by fossicking, while in dry seasons, when constant work is not obtainable, the search for opal is blocked by the absence of grass and water on the fields.

Owing to difficulty in disposing of the product, little mining was carried on in 1922 and 1923 at the Stuart's Range opal field in South Australia, and no production was recorded. The field is extremely prolific, and only a small portion of the known opal-bearing area has been tested. A fine collection of gems from this field was dispatched to the British Empire Exhibition.

According to a report a few years ago by the Australian Trade Commissioner in the East there is a good sale for the gems in China. It is stated that there is no difficulty in cutting and polishing, as the Chinese method of dealing with jade, dating back many centuries, can also be applied to opal.

4. **Other Gems.**—Various other gems and precious stones have from time to time been discovered in the different States, the list including agates, amethysts, beryls, chialtolite, emeralds, garnets, olivines, moonstones, rubies, topazes, tourmalines, turquoises, and zircons.

§ 15. Numbers Engaged, Wages Paid, and Accidents in Mining.

1. **Total Employment in Mining.**—The number of persons engaged in the mining industry in Australia fluctuates according to the season, the price of industrial metals, the state of the labour markets, and according also to the permanence of new finds, and the development of the established mines. During the year 1923 the number so employed was as follows :—

NUMBER OF PERSONS ENGAGED IN MINING, 1923.

State.	Number of Persons Engaged in Mining for						Total.
	Gold.	Silver, Lead, and Zinc.	Copper.	Tin.	Coal and Shale.	Other.	
New South Wales ..	1,141	5,155	85	1,047	22,989	2,279	32,696
Victoria ..	2,982	..	..	7	2,131	143	5,263
Queensland ..	603	133	1,176	703	2,662	499	5,776
South Australia ..	32	..	420	..	..	693	1,145
Western Australia ..	5,555	96	80	35	713	18	6,497
Tasmania ..	119	510	1,066	842	318	307	3,162
Northern Territory ..	30	..	3	170	..	27	230
Australia ..	10,462	5,894	2,830	2,804	28,813	3,966	54,769

The following table shows the number of persons engaged in mining in Australia during each of the years 1891, 1901, and 1923, together with the proportion of the total population so engaged. The general falling-off since 1901 is due to the stagnation caused by the war, the low price of industrial metals, and largely also to the decline in the gold-mining industry :—

NUMBER ENGAGED IN MINING PER 100,000 OF POPULATION, 1891, 1901, AND 1923.

State.	1891.		1901.		1923.	
	Miners Employed.	No. per 100,000 of Popu- lation.	Miners Employed.	No. per 100,000 of Popu- lation.	Miners Employed.	No. per 100,000 of Popu- lation.
New South Wales ..	30,604	2,700	36,615	2,685	32,696	1,519
Victoria ..	24,649	2,151	28,670	2,381	5,253	334
Queensland ..	11,627	2,934	13,352	2,664	5,776	740
South Australia ..	2,683	834	7,007	1,931	1,145	226
Western Australia ..	1,269	2,496	20,895	11,087	6,497	1,913
Tasmania ..	3,988	2,695	6,923	4,017	3,162	1,472
Northern Territory ..	..	..	..	..	230	6,296
Australia ..	74,820	2,341	113,462	2,992	54,759	983

2. **Wages Paid in Mining.**—Information regarding rates of wages paid in the mining industry, which in earlier issues of the Year Book was given in this chapter, is now contained in the Labour Report issued by this Bureau.

3. **Accidents in Mining, 1923.**—The following table gives particulars of the number of men killed and injured in mining accidents during the year 1923 :—

MINING ACCIDENTS, 1923.

Mining for—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	Australia.
KILLED.								
Coal and shale	31	1	2	..	..	1	..	35
Copper ..	..	..	4	..	..	1	..	5
Gold ..	2	1	..	..	10	..	..	13
Silver, lead, and zinc ..	1	..	1	..	1	..	..	3
Tin ..	2	..	..	..	..	..	..	2
Other minerals	1	..	..	2	..	..	..	3
Total ..	37	2	7	2	11	2	..	61

INJURED.								
Coal and shale	101	11	11	..	62	3	..	188
Copper ..	..	..	24	1	..	17	..	42
Gold ..	1	6	4	..	241	..	..	252
Silver, lead, and zinc ..	46	..	5	..	4	5	..	60
Tin ..	..	..	..	..	..	8	..	8
Other minerals	1	..	..	6	..	..	..	7
Total ..	149	17	44	7	307	33	..	557

The number killed in mining accidents in 1923 was considerably less than that for 1921 when 132 deaths were recorded, the figures being swollen by the 75 fatalities in the Colliery disaster at Mount Mulligan in Queensland.

§ 16. State Aid to Mining.

1. **Introduction.**—The terms and conditions under which the States granted aid to mining were alluded to at some length in previous issues (see Year Books 4 and 5), but owing to considerations of space they have been omitted from this issue. A résumé of what is being done in this direction at the present time is given hereunder.

2. **New South Wales.**—The chief aid given in this State is in the direction of assistance to prospectors. Up to the end of 1923 the total sum expended in this manner amounted to £542,049, of which £9,574 was advanced in 1923. A sum of £1,000 was made available during the year for the purpose of assisting in the erection of crushing batteries or reduction plants, and an advance of £500 made therefrom. The reward for the discovery of new mineral fields within the State has been increased from £500 to £1,000, with provision for sums of £200 and £500 in respect of fields not large enough to qualify for the full amount, and the conditions have been made more liberal.

3. **Victoria.**—Since the passage of the Mining Development Act in 1897, the expenditure under its varying provisions has been £1,178,871, of which £281,000 was disbursed in connexion with advances to companies, £313,000 on boring, £244,000 on mining enterprise, £101,000 on advances to miners, £93,000 on maintenance, removal, etc., of batteries, and about £95,000 in connexion with the State brown coal mine. The expenditure for the financial year 1923–24 amounted to about £68,000, of which £46,000 was incurred in connexion with the State brown coal mine, and £11,000 was spent on boring.

4. **Queensland.**—State assistance to the mining industry in 1923 amounted to £13,106, of which £3,067 consisted of loans in aid of deep sinking; £8,742 grants in aid of prospecting, and £1,297 in aid of roads and bridges to gold and mineral fields and water supply. In addition, a sum of £86,812 was expended from loans on Chillagoe and the Mt. Mulligan mine.

During the year the Chillagoe State Smelters produced 1,715 tons of lead and 491 tons of copper, the gold and silver contents of which amounted to 1,553 oz., and 179,480 oz. respectively. The State Arsenic Works at Jibbinbar produced 340 tons of high-grade arsenic. Tin, wolfram, and molybdenite are treated at the State Battery at Bamford, which, on account of low prices, was not in operation during 1923. About 700 tons of ore and 300 tons of tailings were treated by the State Battery at Charters Towers. A new State battery was completed in 1922 at Kidston on the Etheridge gold-field and during 1923 treated 2,611 tons of ore for a yield of 880 oz. gold and 27 tons of concentrates. The State Assay Office at Cloncurry made over 2,400 assays for the public during the year.

5. **South Australia.**—Aid is given to the mining industry under the terms of the Mining Act of 1893, and previous measures. Up to the end of 1923 the total amount of subsidy paid was £65,163, of which £13,227 has been repaid, and £2,250 written off, leaving a debit of £49,686. Portion of this amount is represented by machinery that has fallen into the hands of the Government. Repayments must be provided from profits, but in only two instances have the profits enabled a full return to be made.

6. **Western Australia.**—Under the Mining Development Act of 1902 assistance was granted in 1923 in accordance with the subjoined statement :—Advances in aid of mining work and equipment of mines with machinery, £33,914; aid to prospectors, £6,306; advances in aid of boring, £759; subsidies paid on stone crushed for the public, £256; making a total of £41,235. In addition, a sum of £14,061 was expended on various matters such as water supply, assistance in carting ore for long distances, aid in developmental work below the 100 feet level in small mines, and rebates to prospectors working low-grade mines. The receipts under the Act, exclusive of interest payments, came to £3,262, of which £1,664 consisted of refunds of advances.

In 1923 there were 29 State batteries in operation. The amount expended thereon up to the end of 1923 was £91,981 from revenue and £305,608 from loan, giving a total of £397,589. During the year receipts amounted to £28,335, and working expenditure to £38,408. The total value of gold and tin recovered to the end of 1923 at the State plants was £5,768,930, resulting from the treatment of 1,384,000 tons of gold ore and 80,000 tons of tin ore, together with a small amount from residues.

7. **Tasmania.**—During the year 1923, the sum of £1,887 was expended in aid to mining, including £520 for salaries, £91 for assay material, £328 assistance to prospectors, and advance of £352 to the No. 6 Argent Mining Company. The receipts amounted to £2,568, of which £1,967 represented royalty by tributers.

Tributers' surveys and assays are made free of charge by the Assay and Survey Office at Zeehan.

8. **Northern Territory.**—During the year 1922–23 Government assistance to prospecting parties amounted to £304, while in some cases help in the form of free use of horses and plant was granted. There were no subsidies for underground mining.

The Government maintains a battery at Marranboy, and the Government Assayer makes free assays for prospectors, and arranges for the sampling, storage, and sale of ores.

§ 17. Commonwealth Government Control of Industrial Metals.

The proclamation under the Customs Act prohibiting the exportation of metals without the consent of the Minister for Trade and Customs is still in force, but consent is granted in every case where the contract relating to the sale of the metals has been approved.

§ 18. Metallic Contents of Ores, etc., Produced and Exported.

1. *Local Production.*—According to returns compiled by the Secretary of the Australian Metal Exchange from information obtained from mining companies and metal smelting and refining works, the quantities of the principal metals (exclusive of gold) extracted in Australia during the five years 1920 to 1924 were as follows :—

REFINED METALS PRODUCED IN AUSTRALIA, 1920 TO 1924.

Metal.		1920.	1921.	1922.	1923.	1924.
Silver ..	ozs.	681,370	4,572,878	7,896,052	7,645,689	7,631,213
Lead, pig ..	tons	4,077	55,749	105,528	118,513	126,625
Zinc ..	tons	9,665	1,681	23,724	41,153	46,372
Copper ..	tons	24,069	18,600	11,524	17,825	14,100
Tin ..	tons	4,108	2,985	2,657	2,201	1,926

2. *Metallic Contents of Ores, Concentrates, etc., Exported.*—The estimated metallic contents of ores, concentrates, etc., exported during the five years 1920 to 1924 are given in the following table :—

METALLIC CONTENTS OF ORES, CONCENTRATES, ETC., EXPORTED, 1920 TO 1924.

Metal.	Contained in—	1920.	1921.	1922.	1923.	1924.
Silver	ozs. { Lead—Silver—Gold Bullion	141,263	64,811	165,290	283,453	153,361
	Lead Concentrates ..	..	210,944	281,728	1,298,750	90,360
	Zinc Concentrates ..	522,515	456,317	3,390,964	3,526,774	1,941,507
	Copper Ores ..	..	..	12,261	1,378	51,942
	Total ..	663,778	732,072	3,850,243	5,110,355	2,242,170
Lead	tons { Lead—Silver—Gold Bullion	1,939	580	1,790	3,564	1,808
	Lead Concentrates ..	4,122	3,950	2,959	18,572	4,852
	Zinc Concentrates ..	3,170	2,498	19,910	425	19,859
	Total ..	9,231	7,028	24,659	22,561	26,519
Zinc	tons { Lead Concentrates ..	..	435	..	..	384
	Zinc Concentrates ..	24,242	19,181	135,690	146,693	122,305
	Total ..	24,242	19,616	135,690	146,693	122,689
Copper	tons Ores, Matte, etc. ..	2,117	34	326	2,182	876
Tin	tons Concentrates ..	70	5	..	..	4

§ 19. Oversea Exports of Ores, Metals, etc.

The following table shows the quantity and value of the principal oversea exports of ores, concentrates, and metals, the produce of Australia, together with the countries to which the respective products were forwarded, for the year 1923-24 :—

OVERSEA EXPORTS OF AUSTRALIAN ORES, METALS, ETC., 1923-24.

Article.	Total Exports.	Exports to—						
		United Kingdom.	United States.	Belgium.	Germany.	Japan.	New Zealand.	Other Countries.
QUANTITY.								
Ores—	cwt.	cwt.	cwt.	cwt.	cwt.	cwt.	cwt.	cwt.
Alunite	32,860	32,860	..	..	..	..	..	..
Antimony	8,695	6,700	1,995	..	..	..	..	..
Cobalt	22,531	22,331	200	..	..	..	..	..
Silver and Silver-lead	108,772	185	..	53,572	55,015	..	..	..
Concentrates—								
Silver and Silver-lead	627,814	41,817	..	31,933	261,163	..	..	(h)292,901
Zinc	5,410,461	1,464,491	..	3,617,982	126,401	194	..	(b)201,393
Copper—								
Matte	23,389	20,137	..	..	3,252	..	..	..
Ingot	116,029	77,285	18,405	..	2,500	..	2,359	(c)15,480
Tin—Ingot	40,041	25,077	10,580	..	100	..	4,232	52
Lead—								
Matte	83,525	83,525	..	..	..	..	..	..
Pig	2,116,330	1,618,828	..	9,987	57,111	293,301	58,282	(d)78,821
Zinc—Bars, Blocks, etc.	638,516	213,282	..	..	59,993	296,775	368	(g)68,098
Iron—Pig	2,738	..	..	..	..	..	558	(f)2,180
	oz.	oz.	oz.	oz.	oz.	oz.	oz.	oz.
Platinum, Osmium, etc.	1,101	636	355	..	..	..	..	(b)110
Gold—								
Matte	3,411	3,411	..	..	..	..	..	..
Bar, Dust, etc. ..	91,008	651	..	..	..	..	..	(a)90,357
Silver—								
Matte	447,001	437,000	..	..	..	..	..	(e)10,001
Bar, Ingot, etc. ..	7,111,964	652,184	..	..	..	..	3,428	(i)6,456,352
VALUE—£.								
Ores—								
Alunite	6,572	6,572	..	..	..	..	..	..
Antimony	9,482	7,326	2,156	..	..	..	..	..
Cobalt	57,152	56,497	655	..	..	..	..	..
Silver and Silver-lead	118,515	140	..	63,640	54,735	..	..	..
Concentrates—								
Silver and Silver-lead	441,075	34,216	..	22,060	182,625	..	..	(h)202,174
Zinc	1,160,472	321,882	..	764,750	27,370	52	..	(b)46,418
Copper—								
Matte	74,737	70,050	..	..	4,687	..	..	..
Ingot	392,187	267,436	56,393	..	8,500	..	8,462	(c)51,396
Tin—Ingot	447,757	276,068	122,651	..	995	..	47,418	625
Lead—								
Matte	124,678	..	..	..	..	..	..	..
Pig	3,198,785	2,465,196	..	16,970	84,495	419,988	95,894	(d)116,233
Zinc—Bars, Blocks, etc.	1,057,895	357,898	..	..	105,850	479,194	513	(g)114,140
Iron—Pig	1,097	..	..	..	..	..	258	(f)839
Platinum, Osmium, etc.	29,198	15,371	10,141	..	..	..	..	(b)3,686
Gold—								
Matte	15,003	15,003	..	..	..	..	..	..
Bar, Dust, etc. ..	385,738	2,977	..	..	..	..	..	(a)382,761
Silver—								
Matte	65,643	64,323	..	..	..	..	..	(e)1,320
Bar, Ingot, etc. ..	997,874	101,835	..	..	..	..	482	(i)895,557

(a) Ceylon, 63,492 oz., £268,646; China, 26,865 oz., £114,115. (b) France. (c) India.
 (d) Principally China and Hong Kong. (e) Ceylon, 9,001 oz., £1,170. (f) Principally South African Union.
 (g) India, 1,100 cwt., £2,090; France, 60,998 cwt., £101,550; Italy, 6,000 cwt., £10,500. (h) Spain. (i) Ceylon, 97,610 oz., £13,146; India, 4,328,319 oz., £638,029; Pacific Islands, 5,350 oz., £881; China, 2,025,073 oz., £243,501.

CHAPTER XXII.

MANUFACTURING INDUSTRY.

[NOTE.]—In the case of Queensland and Western Australia, the year ends on the 31st December, and in New South Wales, Victoria, South Australia, and Tasmania on the 30th June, six months later.

In all tables relating to employees—except where specially mentioned—"Number of Employees" includes working proprietors.

§ 1. Number and Classification of Factories.

1. General.—The number of factories in each State does not necessarily furnish an accurate indication of the extent or progress of manufacturing throughout Australia, since the larger establishments in many cases tend to absorb smaller enterprises, while on the other hand new factories are constantly springing up, and small plants are as numerous as large ones.

2. Number of Factories in each State, 1919-20 to 1923-24.—The following table gives the number of factories in each State for the years 1919-20 to 1923-24 :—

FACTORIES.—NUMBER IN EACH STATE, 1919-20 TO 1923-24.

Year.(a)	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
1919-20 ..	5,662	6,038	1,754	1,368	817	652	16,291
1920-21 ..	5,837	6,532	1,795	1,438	895	616	17,113
1921-22 ..	6,356	6,753	1,810	1,432	986	686	18,023
1922-23 ..	6,702	7,096	1,878	1,609	1,199	689	19,173
1923-24 ..	7,321	7,289	1,912	1,698	1,188	781	20,189

(a) See general note above.

3. Classification of Factories, Australia, 1919-20 to 1923-24.—The following table shows the number of factories in Australia for each year from 1919-20 to 1923-24, classified in the groups agreed upon by the Conferences of Statisticians in 1902 and 1906. Details in regard to some of the principal industries in these groups will be found in § 9 hereinafter :—

FACTORIES.—CLASSIFICATION, AUSTRALIA, 1919-20 TO 1923-24.

Class of Industry.	1919-20. (a)	1920-21. (a)	1921-22. (a)	1922-23. (a)	1923-24. (a)
I. Treating raw material, product of agricultural and pastoral pursuits, etc. ..	No. 799	No. 772	No. 762	No. 810	No. 799
II. Treating oils and fats, animal, vegetable, etc. ..	92	92	99	97	99
III. Processes in stone, clay, glass, etc. ..	670	707	786	782	845
IV. Working in wood ..	1,912	2,053	2,103	2,236	2,497
V. Metal Works, machinery, etc. ..	1,974	2,133	2,181	2,349	2,575
VI. Connected with food and drink, etc. ..	2,427	2,453	2,539	2,635	2,702
VII. Clothing and textile fabrics, etc. ..	3,311	3,499	3,893	4,225	4,408
VIII. Books, paper, printing and engraving ..	1,247	1,259	1,313	1,347	1,423
IX. Musical instruments, etc. ..	37	43	45	59	50
X. Arms and explosives ..	17	17	17	14	15
XI. Vehicles and fittings, saddlery and harness, etc. ..	1,514	1,634	1,778	1,913	2,189
XII. Ship and boat building and repairing ..	80	79	81	81	88
XIII. Furniture, bedding, and upholstery ..	817	916	927	1,010	1,160
XIV. Drugs, chemicals, and by-products ..	293	305	313	327	323
XV. Surgical and other scientific instruments ..	71	73	77	81	84
XVI. Jewellery, timepieces, and plated ware ..	215	233	247	254	258
XVII. Heat, light, and power ..	515	529	563	590	435
XVIII. Leatherware, n.e.i. ..	93	101	115	118	126
XIX. Minor wares, n.e.i. ..	207	215	234	245	113
Total ..	16,291	17,113	18,023	19,173	20,189

(a) See general note above.

CLASSIFICATION OF FACTORIES ACCORDING TO NUMBER OF EMPLOYEES. 813

For the purpose of the returns in the above table the definition of a factory adopted at the Conference of Statisticians in 1902 is used, viz., "Any factory, workshop or mill where four or more persons are employed or power is used."

The expansion in the number of factories in Australia has been particularly marked since 1919-20. Roughly 1,000 additional establishments have been added to the total number during each of the past four years. As previously pointed out, moreover, any increase or decrease in the number of factories from year to year does not necessarily indicate a change in the position of the industry.

4. Classification of Factories, States, 1923-24.—The following table shows the number of factories in each State during 1923-24, classified according to the nature of the industry :—

FACTORIES.—CLASSIFICATION, STATES, 1923-24.

Class of Industry.	N.S.W. 1923-24.	Vic. 1923-24.	Q'land. 1923.	S. Aust. 1923-24.	W. Aust. 1923.	Tas. 1923-24.	Aus.
I. Treating raw material, product of agricul. & pastoral pursuits, etc.	253	286	43	97	50	70	799
II. Treating oils and fats, animal, vegetable, etc.	43	28	11	10	5	2	99
III. Processes in stone, clay, glass, etc.	359	252	42	110	57	25	845
IV. Working in wood	948	689	332	138	167	223	2,497
V. Metal works, machinery, etc.	927	991	223	256	130	48	2,575
VI. Connected with food & drink, etc.	898	720	476	261	225	122	2,702
VII. Clothing and textile fabrics, etc.	1,541	1,967	283	323	190	104	4,408
VIII. Books, paper, printing & engraving	553	528	134	98	89	21	1,423
IX. Musical instruments, etc.	22	20	..	5	3	..	50
X. Arms and explosives	4	10	..	1	..	..	15
XI. Vehicles and fittings, saddlery and harness, etc.	808	828	155	202	125	71	2,189
XII. Ship and boat building & repairing	47	12	9	10	5	5	88
XIII. Furniture, bedding and upholstery	390	450	121	93	61	45	1,160
XIV. Drugs, chemicals, and by-products	137	130	6	20	17	13	323
XV. Surgical and other scientific instruments	23	36	12	7	6	..	84
XVI. Jewellery, timepieces & plated ware	84	111	16	26	10	11	258
XVII. Heat, light, and power	185	142	34	23	33	18	435
XVIII. Leatherware, n.e.l.	44	62	8	6	4	2	126
XIX. Minor wares, n.e.l.	55	27	7	12	11	1	113
Total	7,321	7,289	1,912	1,698	1,188	781	20,189

§ 2. Classification of Factories according to Number of Employees.

1. States, 1923-24.—A more satisfactory method of measuring the importance of the manufacturing industry in Australia may, perhaps, be obtained by grouping the factories according to the average number of employees therein.

The following table shows, for each State, the number of factories classified according to the number of hands employed, and the average number of hands employed therein, during 1923-24 :—

FACTORIES.—CLASSIFICATION ACCORDING TO NUMBER OF EMPLOYEES, 1923-24.

No. of Persons Employed in each Factory.	N.S.W. 1923-24.	Victoria. 1923-24.	Q'land. 1923.	S. Aust. 1923-24.	W. Aust. 1923.	Tasmania. 1923-24.	Australia.
NUMBER OF FACTORIES.							
Under 4	1,769	1,636	328	287	316	153	4,489
4	699	729	165	144	137	88	1,962
5 to 10	2,213	2,233	602	625	376	299	6,348
11 to 20	1,164	1,202	363	280	156	122	3,287
21 to 50	916	939	268	224	123	76	2,546
51 to 100	309	311	85	89	50	31	875
Over 100	251	239	101	49	30	12	682
Total	7,321	7,289	1,912	1,698	1,188	781	20,189

**FACTORIES.—CLASSIFICATION ACCORDING TO NUMBER OF EMPLOYEES,
1923-24—continued.**

No. of Persons Employed in each Factory.	N.S.W. 1923-24.	Victoria. 1923-24.	Q'land. 1923.	S. Aust. 1923-24.	W. Aust. 1923.	Tasmania. 1923-24.	Australia.
AVERAGE NUMBER OF HANDS EMPLOYED.							
Under 4 ..	3,728	3,643	725	688	662	343	9,789
4 ..	2,796	2,916	660	576	548	352	7,848
5 to 10 ..	15,322	15,567	4,217	4,399	2,557	2,085	44,147
11 to 20 ..	17,096	17,368	5,302	4,072	2,279	1,772	47,889
21 to 50 ..	28,941	29,960	8,302	7,129	3,944	2,407	80,683
51 to 100 ..	21,269	21,623	6,146	6,205	3,403	2,220	60,866
Over 100 ..	70,522	65,085	19,596	14,206	6,319	3,040	178,768
Total ..	159,674	156,162	44,948	37,275	19,712	12,219	429,990

2. Australia, 1919-20 to 1923-24.—For the period covered in the following table the number of factories has increased at a faster rate than that of employees, consequently a reduction has occurred in the average number of employees per factory. The same reason may be assigned for the decrease in the proportionate number of hands employed in the larger establishments, which dropped from 43.36 per cent. of the total employment in 1919-20 to 41.57 per cent. in 1923-24.

**FACTORIES.—CLASSIFICATION ACCORDING TO NUMBER OF EMPLOYEES,
AUSTRALIA, 1919-20 TO 1923-24.**

Year.(a)	Establishments Employing on the Average—							
	20 hands and under.		21 to 100 hands.		101 hands and upwards.		Total.	
	Es- tablish- ments.	Hands.	Es- tablish- ments.	Hands.	Es- tablish- ments.	Hands.	Es- tablish- ments.	Hands.
1919-20—								
Number ..	12,666	92,010	2,975	121,388	650	163,336	16,291	376,734
Average per establishment ..		7.26		40.80		251.29		23.13
Percentage on total ..	77.75	24.42	18.26	32.22	3.99	43.36	100.00	100.00
1920-21—								
Number ..	13,396	96,379	3,066	124,307	651	165,953	17,113	386,639
Average per establishment ..		7.19		40.54		254.92		22.59
Percentage on total ..	78.28	24.93	17.92	32.15	3.80	42.92	100.00	100.00
1921-22—								
Number ..	14,211	100,301	3,163	127,692	649	167,432	18,023	395,425
Average per establishment ..		7.06		40.37		257.98		21.94
Percentage on total ..	78.86	25.37	17.54	32.29	3.60	42.34	100.00	100.00
1922-23—								
Number ..	15,176	104,545	3,337	137,998	660	169,867	19,173	412,410
Average per establishment ..		6.89		41.35		257.37		21.51
Percentage on total ..	79.15	25.35	17.41	33.46	3.44	41.19	100.00	100.00
1923-24—								
Number ..	16,086	109,673	3,421	141,549	682	178,768	20,189	429,990
Average per establishment ..		6.82		41.38		262.12		21.30
Percentage on total ..	79.68	25.51	16.94	2.92	3.38	41.57	100.00	100.00

(a) See general note on first page of this Chapter.

§ 3. Power used in Factories.

1. States, 1923-24.—The following table shows the number of factories using steam, gas, oil, electricity, or water, and the horse-power of engines or motors during 1923-24 :—

FACTORIES.—HORSE-POWER OF ENGINES USED, 1923-24.

State.	Number of Establishments.			Actual Horse-power of Engines Used.					
	Using Machinery worked by Steam, Gas, Oil, Electricity, or Water.	Others.	Total.	Steam.	Gas.	Oil.	Electricity.	Water.	Total.
	No.	No.	No.	H.P.	H.P.	H.P.	H.P.	H.P.	H.P.
N.S.W., 1923-24	6,442	879	7,321	225,671	14,112	3,312	136,117	48	379,260
Vict., 1923-24	6,001	1,288	7,289	195,744	18,394	5,083	95,340	(a)	314,561
Q'land., 1923 ..	1,565	347	1,912	92,571	12,768	1,736	22,681	33	129,989
S. Aust., 1923-24	1,390	308	1,698	68,105	9,594	3,576	22,626	4	103,905
W. Aust., 1923	974	214	1,188	44,826	5,115	1,942	15,956	..	67,839
Tas., 1923-24..	684	97	781	6,766	254	628	51,165	56,407	115,220
Australia ..	17,056	3,133	20,189	633,683	60,237	16,277	344,085	56,492	1,110,774

(a) Statistics of Water Power not collected.

The utilization of mechanical power in factories is greatest in New South Wales where the largest number of industries requiring a considerable amount of power are located. Victoria, on the other hand, has the largest number of establishments, such as those connected with clothing and textile fabrics, wherein much less power is utilized.

The number of establishments in Australia during 1923-24 using steam, gas, oil, electricity, or water was 17,056, or 84.48 per cent. of the total; 3,133 establishments, representing 15.52 per cent., used no mechanical power. The total actual horse-power in use was 1,110,774, distributed in the following proportions :—Steam, 57.05 per cent. ; gas, 5.42 per cent. ; oil, 1.46 per cent. ; electricity, 30.98 per cent. ; and water, 5.09 per cent.

2. Australia, 1919-20 to 1923-24.—The following table shows the horse-power of engines used in connexion with factories in Australia during each of the last five years :—

FACTORIES.—HORSE-POWER OF ENGINES USED, AUSTRALIA, 1919-20 TO 1923-24.

Year.(a)	Number of Establishments.			Actual Horse-power of Engines used.					
	Using Machinery worked by Steam, Gas, Oil, Electricity or Water.	Others.	Total.	Steam.	Gas.	Oil.	Electricity.	Water.	Total.
	No.	No.	No.	H.P.	H.P.	H.P.	H.P.	H.P.	H.P.
1919-20 ..	13,146	3,145	16,291	402,152	58,349	11,872	176,476	11,167	660,016
1920-21 ..	13,943	3,170	17,113	437,851	59,365	11,884	217,916	15,465	742,481
1921-22 ..	14,859	3,164	18,023	460,258	57,877	10,363	249,379	20,216	798,093
1922-23 ..	15,951	3,222	19,173	475,917	59,702	12,240	283,850	35,732	867,441
1923-24 ..	17,056	3,133	20,189	633,683	60,237	16,277	344,085	56,492	1,110,774

(a) See general note on first page of this Chapter.

The growth of electrical power has been one of the chief factors in the rapid increase of mechanical power which has taken place in factories during recent years. From 72,250 horse-power in 1913, or roughly one-sixth of the total horse-power of engines used, it had increased to 344,085 horse-power, or one-third of the total installations in 1923-24. Steam power continues to expand with the development of the larger industries, but the increase in the use of gas and oil engines is negligible. During the past four years 112,690 horse-power has been added each year to the plant actually in use.

3. Classes of Industry, States, 1923-24.—The following table gives a classification of the actual horse-power of engines used in factories of different descriptions in each State during 1923-24 :—

FACTORIES.—HORSE-POWER OF ENGINES USED IN EACH CLASS, 1923-24.

Class of Industry.	N.S.W. 1923-24.	Victoria. 1923-24.	Q'land. 1923.	S. Aust. 1923-24.	W. Aust. 1923.	Tas. 1923-24.	Aus- tralia.
	H.P.	H.P.	H.P.	H.P.	H.P.	H.P.	H.P.
I. Treating raw material, product of agricultural and pastoral pursuits, etc. . .	9,583	9,372	1,392	2,163	954	855	24,319
II. Treating oils and fats, animal, vegetable, etc. . .	2,156	882	191	473	126	20	3,848
III. Processes in stone, clay, glass, etc. . .	23,461	13,332	2,023	5,132	2,863	1,803	48,614
IV. Working in wood . .	23,361	18,037	10,907	3,300	8,832	3,797	68,234
V. Metal works, machinery, etc.	74,350	22,262	10,858	13,994	5,026	35,663	162,153
VI. Connected with food and drink, etc. . .	41,764	42,464	52,203	10,528	8,983	4,040	159,982
VII. Clothing and textile fabrics, etc. . .	9,783	19,372	3,083	1,219	521	1,317	35,295
VIII. Books, paper, printing, and engraving . .	11,830	9,671	1,798	1,855	1,082	333	26,569
IX. Musical instruments, etc. . .	722	366	..	26	2	..	1,116
X. Arms and explosives . .	688	543	..	5	..	..	1,236
XI. Vehicles and fittings, saddlery and harness, etc. . .	3,510	3,173	641	3,452	427	251	11,454
XII. Ship and boat building and repairing . .	9,014	1,409	94	658	45	27	11,247
XIII. Furniture, bedding, and upholstery . .	3,830	3,536	1,418	1,360	708	486	11,338
XIV. Drugs, chemicals, and by-products . .	3,697	4,175	188	3,066	1,185	67	12,378
XV. Surgical and other scientific instruments . .	76	63	42	21	16	..	218
XVI. Jewellery, timepieces, and plated ware . .	439	518	37	81	28	17	1,120
XVII. Heat, light, and power . .	159,430	153,249	44,984	56,533	36,910	66,515	522,621
XVIII. Leatherware, n.e.i. . .	191	469	35	7	57	1	760
XIX. Minor wares, n.e.i. . .	1,375	6,668	95	32	74	28	8,272
Total . . .	379,260	314,561	129,989	103,905	67,839	115,220	1,110,774

4. Classes of Industry, Australia, 1919-20 to 1923-24.—The following table shows a similar classification of the actual horse-power of engines used in manufacturing industries in Australia during the years 1919-20 to 1923-24 inclusive :—

FACTORIES.—HORSE-POWER OF ENGINES USED, AUSTRALIA, 1919-20 TO 1923-24.

Class of Industry.	1919-20. (a)	1920-21. (a)	1921-22. (a)	1922-23. (a)	1923-24. (a)
I. Treating raw material, product of agricultural and pastoral pursuits, etc. . .	21,005	22,475	23,439	23,976	24,319
II. Treating oils and fats, animal, vegetable, etc. . .	3,109	3,098	3,062	3,421	3,848
III. Processes in stone, clay, glass, etc. . .	31,392	38,290	41,031	42,787	48,614
IV. Working in wood . .	53,656	60,363	58,677	60,343	68,234
V. Metal works, machinery, etc. . .	106,792	122,744	135,690	140,009	162,153
VI. Connected with food and drink, etc. . .	120,408	124,550	136,773	147,160	159,982
VII. Clothing and textile fabrics, etc. . .	22,014	24,342	28,451	30,382	35,295
VIII. Books, paper, printing, and engraving . .	17,444	18,201	21,392	21,812	26,569
IX. Musical instruments, etc. . .	540	704	590	888	1,116
X. Arms and explosives . .	2,192	1,446	1,691	809	1,236
XI. Vehicles and fittings, saddlery and harness, etc. . .	5,770	6,410	6,990	8,361	11,454
XII. Ship and boat building and repairing . .	6,860	10,076	11,879	11,406	11,247
XIII. Furniture, bedding, and upholstery . .	7,667	8,227	8,923	9,995	11,338
XIV. Drugs, chemicals, and by-products . .	9,631	10,332	11,386	11,309	12,378
XV. Surgical and other scientific instruments . .	145	156	179	209	218
XVI. Jewellery, timepieces, and plated ware . .	839	885	945	1,066	1,120
XVII. Heat, light, and power . .	241,893	280,589	297,409	344,373	522,621
XVIII. Leatherware, n.e.i. . .	571	616	651	708	760
XIX. Minor wares, n.e.i. . .	8,178	8,977	8,935	8,427	8,272
Total . . .	660,016	742,481	798,093	867,441	1,110,774

(a) See general note on first page of this Chapter.

The actual horse-power of engines used increased in every branch of industry except Arms and Explosives during the last four years. The industries using the greatest amount of power were Class XVII. Heat, light, and power; Class V. Metal works, machinery, etc.; and Class VI. Connected with food and drink. These three classes, which together accounted for 76.05 per cent. of the total power used in 1923-24, increased their horse-power from 469,093 to 844,756 during the four years under review, and are mainly responsible for the development of mechanical power in factories since 1919-20.

§ 4. Employment in Factories.

1. **Total Number Employed.**—Each person employed in and about a factory, in whatever capacity, is now included as a factory employee, consequently every proprietor who works in his own business is counted as an employee, and all "outworkers" (see sub-section 5 (ii) hereinafter) are also included. The individuals embraced may be classed under the following heads:—(i) Working proprietors; (ii) managers and overseers; (iii) accountants and clerks; (iv) engine-drivers and firemen; (v) skilled and unskilled workers in the factories, mills, or workshops; (vi) carters and messengers; and (vii) others.

The following table shows, for each year from 1919-20 to 1923-24 inclusive, (a) the average numbers of persons (including both sexes and all ages) employed in manufacturing industries in each State; (b) the percentage of the numbers employed in each State on the total numbers employed in Australia; and (c) the numbers employed per ten thousand of the mean population in each State and Australia:—

FACTORIES.—EMPLOYMENT, 1919-20 TO 1923-24.

Year.(a)	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
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AVERAGE NUMBER.

1919-20	..	144,454	136,522	40,891	29,442	15,409	10,016	376,734
1920-21	..	145,011	140,743	43,196	30,430	17,034	10,225	386,639
1921-22	..	148,876	144,876	42,248	31,171	18,127	10,127	395,425
1922-23	..	152,266	152,625	43,403	34,695	19,097	10,324	412,410
1923-24	..	159,674	156,162	44,948	37,275	19,712	12,219	429,990

PERCENTAGE ON AUSTRALIAN TOTAL.

		%	%	%	%	%	%	%
1919-20	..	38.34	36.24	10.85	7.82	4.09	2.66	100.00
1920-21	..	37.51	36.40	11.17	7.87	4.41	2.64	100.00
1921-22	..	37.65	36.64	10.69	7.88	4.58	2.56	100.00
1922-23	..	36.92	37.01	10.53	8.41	4.63	2.50	100.00
1923-24	..	37.13	36.32	10.45	8.67	4.59	2.84	100.00

PER 10,000 OF MEAN POPULATION.

1919-20	..	709	908	564	611	482	488	714
1920-21	..	693	921	578	620	517	486	715
1921-22	..	699	934	553	620	544	475	719
1922-23	..	701	960	556	676	562	481	734
1923-24	..	723	966	560	710	566	558	750

(a) See general note on first page of this Chapter.

2. Rates of Increase, 1918-19 to 1923-24.—The following table shows the percentage of increase or decrease on the average number of persons employed for the preceding year in each of the years from 1918-19 to 1923-24.

FACTORY EMPLOYEES.—PERCENTAGE OF INCREASE, 1918-19 TO 1923-24.

Years.(a)	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
	%	%	%	%	%	%	%
1918-19—1919-20..	13.22	11.58	-0.24	5.47	19.29	14.95	10.65
1919-20—1920-21..	0.39	3.39	5.64	0.36	10.55	2.09	2.63
1920-21—1921-22..	2.67	2.94	-2.20	2.44	6.42	-0.96	2.27
1921-22—1922-23..	2.28	5.35	2.73	11.31	5.35	1.95	4.30
1922-23—1923-24..	4.87	2.32	3.56	7.44	3.22	18.36	4.26

NOTE.—The minus sign indicates decrease.

(a) See general note on first page of this Chapter.

3. Employees in Classes of Industry, Australia, 1919-20 to 1923-24.—The following table gives the average numbers of persons employed in factories under each group in Australia during the years 1919-20 to 1923-24 inclusive :—

FACTORY EMPLOYEES.—CLASSES, AUSTRALIA, 1919-20 TO 1923-24.

Class of Industry.	1919-20. (a)	1920-21. (a)	1921-22. (a)	1922-23. (a)	1923-24. (a)
I. Treating raw material, product of agricultural and pastoral pursuits, etc. ..	12,040	10,494	10,925	11,394	10,842
II. Treating oils and fats, animal, vegetable, etc. ..	3,075	2,848	3,103	3,173	3,424
III. Processes in stone, clay, glass, etc. ..	16,271	18,311	16,974	18,666	20,256
IV. Working in wood ..	29,865	31,942	32,393	33,102	36,319
V. Metal works, machinery, etc. ..	70,025	80,550	76,798	78,614	88,213
VI. Connected with food and drink, etc. ..	61,757	57,599	59,252	60,888	61,550
VII. Clothing and textile fabrics, etc. ..	89,424	88,577	97,194	102,451	100,850
VIII. Books, paper, printing and engraving ..	26,828	27,522	28,673	31,015	32,659
IX. Musical Instruments, etc. ..	902	1,065	1,154	1,415	1,357
X. Arms and explosives ..	1,662	1,504	1,372	433	803
XI. Vehicles and fittings, saddlery and harness, etc. ..	15,525	16,334	16,808	19,532	22,490
XII. Ship and boat building and repairing ..	8,343	6,702	7,035	6,053	5,794
XIII. Furniture, bedding, and upholstery ..	11,317	11,827	11,475	12,608	15,230
XIV. Drugs, chemicals, and by-products ..	6,436	6,805	6,933	6,884	7,215
XV. Surgical and other scientific instruments ..	495	548	570	582	608
XVI. Jewellery, timepieces, and plated ware ..	2,719	2,707	2,503	2,489	2,447
XVII. Heat, light, and power ..	11,991	12,770	13,431	14,112	12,967
XVIII. Leatherware, n.e.i. ..	2,233	2,191	2,414	2,476	2,576
XIX. Minor wares, n.e.i. ..	5,828	6,343	6,418	6,523	4,390
Total	376,734	386,639	395,425	412,410	420,990

(a) See general note on first page of this Chapter.

On the average during each of the last four years employment has been found for 13,314 additional persons in the manufacturing industries. The class responsible for the bulk of the increase was No. V. Metal works, machinery, etc., in which great development has occurred, especially in the engineering, wire-working, and railway and tramway construction industries.

4. Employees in Classes of Industry, States, 1923-24.—The following table gives a classification of employees in manufacturing industries in each State during 1923-24 :—

FACTORY EMPLOYEES.—CLASSES, STATES, 1923-24.

Class of Industry.	N.S.W. 1923-24.	Vic. 1923-24.	Q'land. 1923.	S.A. 1923-24	W.A. 1923.	Tas. 1923- 24.	Aus- tralia.
I. Treating raw material, product of agricul. and pastoral pursuits, etc.	3,961	4,265	758	890	393	575	10,842
II. Treating oils and fats, animal, vegetable, etc.	1,842	920	161	304	135	62	3,424
III. Processes in stone, clay, glass, etc.	8,867	6,661	946	2,181	1,052	549	20,256
IV. Working in wood	10,277	10,767	5,582	2,031	5,125	2,537	36,319
V. Metal works, machinery, etc.	39,929	25,955	7,067	10,065	3,410	1,787	88,213
VI. Connected with food and drink, etc.	19,699	19,199	13,860	4,154	2,563	2,075	61,550
VII. Clothing and textile fabrics, etc.	31,916	50,248	7,970	5,895	2,917	1,904	100,850
VIII. Books, paper, printing and engraving	12,478	11,995	3,470	2,428	1,369	919	32,659
IX. Musical instruments, etc.	781	498	..	56	22	..	1,357
X. Arms and explosives	376	423	..	4	..	..	803
XI. Vehicles and fittings, saddlery, and harness, etc.	7,663	6,999	1,615	4,561	952	700	22,490
XII. Ship and boat building and repairing	4,980	392	75	292	18	37	5,794
XIII. Furniture, bedding, and upholstery	5,582	5,266	1,655	1,467	820	440	15,230
XIV. Drugs, chemicals, and by-products.	2,874	2,802	131	938	419	51	7,215
XV. Surgical and other scientific instruments	241	195	96	45	31	..	608
XVI. Jewellery, timepieces, & plated ware	873	1,110	135	204	74	51	2,447
XVII. Heat, light, and power	4,318	5,000	1,221	1,603	312	511	12,967
XVIII. Leatherware, n.e.i.	1,162	1,071	170	103	55	15	2,576
XIX. Minor wares, n.e.i.	1,855	2,396	36	52	45	6	4,390
Total	159,674	156,162	44,948	37,275	19,712	12,219	429,990

The largest number employed in any particular class in Australia during 1923-24 was in Class VII., in which there were 100,850 employees, or 23.45 per cent. of the total in all classes. The class affording employment to the smallest number of hands was Class XV., in which there were 608 hands, or 0.14 per cent. of the total. Classes VI., VII., and VIII. include those industries in which female labour is largely employed. (See § 5, 5 hereof.)

5. Employees According to Nature of Employment.—(i) General. In the following table the average numbers of persons employed in each State during 1923-24 are classified according to the nature of their employment :—

FACTORY EMPLOYEES.—NATURE OF EMPLOYMENT, 1923-24.

State.	Average Number of Persons Employed.						Total.
	Working Proprietors.	Managers and Overseers.	Accountants and Clerks.	Engine-drivers and Firemen.	Workers, Skilled & Unskilled, in Factory Mill or Workshop. (a)	Carters, Messengers and Others.	
N.S. Wales, 1923-24	6,267	5,702	7,898	3,206	134,486	2,115	159,674
Victoria, 1923-24 ..	7,500	4,929	6,966	2,197	130,487	4,083	156,162
Queensland, 1923 ..	1,620	1,838	2,328	1,850	34,595	2,717	44,948
S. Australia, 1923-24	1,524	1,231	2,046	603	31,044	827	37,275
W. Australia, 1923	571	1,080	907	421	15,974	759	19,712
Tasmania, 1923-24	606	502	752	364	9,619	376	12,219
Australia ..	18,088	15,282	20,897	8,641	356,205	10,877	429,990

(a) Including outworkers.

(ii) *Outworkers.* The term "outworker" or "homeworker" has acquired a special meaning in connexion with manufacturing industries, and technically embraces only those to whom work is given out by factory owners to be wrought upon in the employees' own homes. Individuals working for themselves are not included. The following table gives particulars of the average number of outworkers connected with factories in each State during each year from 1919-20 to 1923-24 inclusive :—

FACTORIES.—OUTWORKERS(a), 1919-20 TO 1923-24.

Year.(b)	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
1919-1920 ..	733	1,492	19	50	8	28	2,330
1920-1921 ..	471	1,151	41	68	14	45	1,790
1921-1922 ..	618	1,476	26	59	8	48	2,235
1922-1923 ..	547	1,228	33	84	8	32	1,932
1923-1924 ..	470	870	38	35	9	41	1,463

(a) In all tables relating to number of hands employed in factories, outworkers are included.

(b) See general note on first page of this Chapter.

The Factories Acts in each State contain provisions regulating the employment of outworkers. Records of out-work, specifying the names and remuneration of workers, and stating the places where the work is done, must be kept by factory proprietors. Fuller information regarding the operation of the Factories Acts will be found in Official Year Book No. 16, pp. 540 to 566.

§ 5. Sex Distribution in Factories.

1. *Employment of Females.*—In all the States the employment of female labour in factories is regulated by Acts of Parliament. More extended reference to this matter will be found in Official Year Book No. 16, pp. 540 to 566.

2. *Distribution of Employees according to Sex.*—(i) *General.* In New South Wales the ratio of the number of females employed in factories to the number of males during 1886 was about one to seven; in 1891 one to six; in 1903 it became about one to four; and is now less than one to three. In Victoria the ratio of females to males during the year 1886 was about one to five. Five years later (1891) it was somewhat less, but in 1896 had increased to about one woman to three men, and at present is nearly one to two. In Queensland and South Australia the ratio at the latest date was one female employed to every four males, and in the remaining States about one to five. The ratio for Australia was one to three. The employment of women is, however, mainly confined to a few trades.

Increasing activity in the clothing and textile industries is the principal cause of the growth in female employment. Certain occupations are regarded as specially suitable for women, such as clothing and textile manufacture, preparation of food, book-binding, and wrapping and packing connected with various industries. In common also with commercial establishments, a considerable number of factories employ women as clerks and typists.

(ii) *Average Number of Males and Females Employed, 1919-20 to 1923-24.* The following table shows the average number of male and female employees in factories in each State from 1919-20 to 1923-24 :—

FACTORIES.—MALES AND FEMALES EMPLOYED, 1919-20 TO 1923-24.

State.	1919-20.(a)	1920-21.(a)	1921-22.(a)	1922-23.(a)	1923-24.(a)
MALES.					
New South Wales ..	109,836	112,187	112,362	114,970	121,845
Victoria.. ..	92,101	96,379	97,789	103,092	107,578
Queensland ..	33,851	36,011	35,050	35,528	36,788
South Australia ..	23,434	24,548	25,006	27,988	30,261
Western Australia ..	12,789	14,329	15,514	15,851	16,439
Tasmania ..	8,503	8,746	8,525	8,453	10,046
Australia ..	280,514	292,200	294,246	305,882	322,957

FEMALES.					
New South Wales ..	34,618	32,824	36,514	37,296	37,829
Victoria.. ..	44,421	44,364	47,087	49,533	48,584
Queensland ..	7,040	7,185	7,198	7,875	8,160
South Australia ..	6,008	5,882	6,165	6,707	7,014
Western Australia ..	2,620	2,705	2,613	3,246	3,273
Tasmania ..	1,513	1,479	1,602	1,871	2,173
Australia ..	96,220	94,439	101,179	106,528	107,033

(a) See general note on first page of this Chapter.

During the years specified in the above table there has been an increase in the number of male factory employees in Australia of 42,443, or an annual average of 10,611, whilst the number of female employees increased by 10,813, or an annual average of 2,703.

(iii) *Average Number of Males and Females Employed per 10,000 of Mean Population, 1919-20 to 1923-24.* The following table shows the average number of male and female employees per 10,000 of the mean male and female population respectively in each State from 1919-20 to 1923-24 :—

MALE AND FEMALE FACTORY EMPLOYEES PER 10,000 OF MEAN MALE AND FEMALE POPULATION RESPECTIVELY, 1919-20 TO 1923-24.

State.	1919-20.(a)	1920-21.(a)	1921-22.(a)	1922-23.(a)	1923-24.(a)
MALES.					
New South Wales ..	1,054	1,051	1,037	1,038	1,031
Victoria.. ..	1,245	1,279	1,279	1,307	1,333
Queensland ..	895	910	869	862	868
South Australia ..	975	1,001	992	1,087	1,140
Western Australia ..	761	814	875	876	883
Tasmania ..	851	821	792	782	917
Australia ..	1,048	1,063	1,053	1,070	1,105

(a) See general note on first page of this Chapter.

MALE AND FEMALE FACTORY EMPLOYEES PER 10,000 OF MEAN MALE AND FEMALE POPULATION RESPECTIVELY—*continued.*

State.	1919-20.(a)	1920-21.(a)	1921-22.(a)	1922-23.(a)	1923-24.(a)
FEMALES.					
New South Wales ..	330	321	350	350	350
Victoria ..	582	573	599	618	593
Queensland ..	203	204	199	213	215
South Australia ..	249	239	246	262	274
Western Australia ..	173	176	168	205	202
Tasmania ..	148	142	152	175	198
Australia ..	370	356	374	386	380

(a) See general note on first page of this Chapter.

3. Rate of Variation for each Sex.—The percentages of annual increase or decrease during the years 1919-20 to 1923-24 in the average number of males and females employed in factories are shown below :—

PERCENTAGES OF ANNUAL INCREASE, MALE AND FEMALE FACTORY EMPLOYEES, 1919-20 TO 1923-24.

State.	1918-19— 1919-20.(a)	1919-20— 1920-21.(a)	1920-21— 1921-22.(a)	1921-22— 1922-23.(a)	1922-1923— 1923-24.(a)
MALES.					
New South Wales ..	% 13.37	% 2.14	% 0.16	% 2.31	% 5.91
Victoria ..	13.21	4.64	1.46	5.42	4.35
Queensland ..	0.76	6.38	-2.67	1.36	3.54
South Australia ..	4.75	4.75	1.87	11.93	8.12
Western Australia ..	21.83	12.04	8.27	2.17	3.71
Tasmania ..	15.59	2.86	-2.53	-0.84	18.84
Total ..	11.29	4.17	0.70	3.95	5.58

FEMALES.					
New South Wales ..	12.74	-5.18	11.24	2.14	1.43
Victoria ..	8.37	-0.13	6.14	5.19	-1.92
Queensland ..	-4.77	2.06	0.18	9.41	3.62
South Australia ..	8.39	-2.10	4.81	8.79	4.58
Western Australia ..	8.26	3.24	3.40	24.23	0.83
Tasmania ..	11.50	-2.25	8.32	16.79	16.14
Total ..	8.83	-1.85	7.14	5.29	0.47

NOTE.—The minus sign indicates decrease.

(a) See general note on first page of this Chapter.

MASCULINITY (b) OF FACTORY EMPLOYEES, 1919-20 TO 1923-24.

Year.(a)	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
1919-20	52.1	34.9	65.6	59.2	66.0	69.8	48.9
1920-21	54.7	37.0	66.7	61.3	68.2	71.1	51.1
1921-22	51.0	35.0	65.9	60.4	71.2	68.4	48.8
1922-23	51.0	35.1	63.7	61.3	66.0	63.8	48.3
1923-24	52.6	37.8	63.7	62.4	66.8	62.0	50.2

(b) Excess of males over females per 100 of both sexes combined.

5. **Employment of Females in Particular Industries.**—The employment of women in manufacturing industries in Australia is mainly confined to a few trades, of which the more important are comprised in Classes VI., VII., and VIII., viz., in connexion with food, drink, etc., clothing and textile fabrics, and books, paper, printing, etc. The following table shows the average number of females employed in each of these classes in each State during 1923–24, and the percentages of the average number so employed on the total average number of females employed in all classes of factories :—

FEMALES EMPLOYED IN PARTICULAR INDUSTRIES, AND PERCENTAGES ON
AVERAGE TOTAL EMPLOYED. 1923-24.

Class.	N.S.W. 1923-24.	Victoria. 1923-24.	Q'land. 1923.	S. Aust. 1923-24.	W. Aust. 1923.	Tas. 1923-24.	Aus- tralia.
AVERAGE NUMBER.							
VI. Food, drink, etc. . .	6,375	5,180	918	858	463	581	14,375
VII. Clothing and textile fabrics . .	22,235	35,345	5,836	4,343	2,168	1,278	71,255
VIII. Books, paper, printing, etc. . .	3,567	3,338	784	734	306	159	8,858
All other classes	5,652	4,701	622	1,079	336	155	12,545
Total	37,829	48,584	8,160	7,014	3,273	2,173	107,033

PERCENTAGES ON AVERAGE TOTAL FEMALE EMPLOYEES.

[illegible]

The largest proportion of females is engaged in one or other of the three classes of industry indicated, Class VII. being the most important. The classification of the employment of females in the several industries in that class, and the relation of their number to that of the males so employed, are shown in the following table:—

FEMALES EMPLOYED IN EACH INDUSTRY IN CLASS VII. DURING 1923-24.

Industry.	New South Wales. 1923-24.			Victoria. 1923-24.			Other States.		
	Males.	Females	Femininity. (a)	Males.	Females	Femininity. (a)	Males.	Females	Femininity. (a)
Woollen and tweed mills	650	967	19.60	2,218	2,696	9.73	446	555	10.88
Boots and shoes ..	3,889	2,097	-29.94	7,100	5,334	-14.20	1,950	1,094	-28.12
Slop clothing	2,527	8,290	53.28	2,271	7,575	53.87	1,780	5,705	52.44
Clothing (tailoring) }									
Dressmaking and millinery ..	125	3,650	93.38	410	8,311	90.60	43	3,084	97.25
Dyeworks and cleaning	205	174	- 8.18	128	129	0.39	110	117	3.08
Furriers ..	156	212	15.22	202	403	33.22	38	102	45.71
Hats and caps ..	569	885	21.73	693	969	16.61	58	82	17.14
Waterproof and oilskin	18	79	62.89	52	130	42.86	..	..	..
Shirts, ties, and scarves	324	3,366	82.43	431	5,795	86.15	198	2,470	86.16
Hosiery and knitted goods ..	499	1,854	57.59	564	3,460	71.97	20	176	79.59
Rope and cordage ..	415	384	- 3.88	657	481	-15.47	230	149	-21.37
Tents and tarpaulins	139	157	4.54	127	112	- 6.21	106	87	- 9.84
Cotton mills ..	165	120	-15.79	..	..	..	82	4	-90.70
Total, Class VII. ..	9,681	22,235	39.33	14,853	35,395	40.48	5,061	13,625	45.83

NOTE.—The minus sign denotes excess of males over females.

(a) Excess of females over males per 100 of both sexes combined.

§ 6. Child Labour in Factories.

1. **Conditions of Child Labour.**—The employment of young persons in factories in each State of Australia is regulated by Acts of Parliament in a similar manner to the employment of female labour. Reference to the legislation regarding the employment of child labour in factories will be found in Official Year Book No. 16, pp. 540 to 566. The general object of the restrictions imposed is to assure that a proper period shall be devoted to primary education, and that the early years of toil shall not exhaust the worker before the attainment of full growth.

2. **Average Number of Children Employed, 1919-20 to 1923-24.**—In the statistical compilations of the various States the term "child" may be taken to denote any person

under sixteen years of age. The following table shows the average number of children of each sex employed in manufacturing industries in each State during the years 1919-20 to 1923-24 :—

CHILDREN EMPLOYED IN FACTORIES, 1919-20 TO 1923-24.

State.	1919-20.(a)	1920-21.(a)	1921-22.(a)	1922-23.(a)	1923-24.(a)
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MALES.

New South Wales ..	3,824	3,673	3,911	3,995	4,128
Victoria ..	3,721	3,715	3,780	4,031	4,057
Queensland ..	1,214	1,266	1,077	1,119	1,236
South Australia ..	866	991	996	1,125	1,199
Western Australia ..	447	448	401	452	530
Tasmania ..	327	315	287	282	360
Australia ..	10,399	10,408	10,452	11,004	11,510

FEMALES.

New South Wales ..	3,764	3,610	4,150	4,288	4,038
Victoria ..	2,872	2,798	3,120	3,163	3,422
Queensland ..	645	738	774	969	972
South Australia ..	765	679	714	795	773
Western Australia ..	307	311	235	251	200
Tasmania ..	186	193	135	266	294
Australia ..	8,539	8,329	9,128	9,732	9,699

TOTAL.

New South Wales ..	7,588	7,283	8,061	8,283	8,166
Victoria ..	6,593	6,513	6,900	7,194	7,479
Queensland ..	1,859	2,004	1,851	2,088	2,208
South Australia ..	1,631	1,670	1,710	1,920	1,972
Western Australia ..	754	759	636	703	730
Tasmania ..	513	508	422	548	654
Australia ..	18,938	18,737	19,580	20,736	21,209

(a) See general note on first page of this Chapter.

3. Percentage of Children on Total. Number of Employees.—The foregoing table shows a general increase in the number of children employed in factories during the past four years. This increase is slightly greater among the females than is the case with the males, the respective gains being 1,160 and 1,111. Examined in conjunction with the total number of persons employed the percentage of children has decreased since 1919-20.

**PERCENTAGE OF CHILDREN ON TOTAL NUMBER OF FACTORY EMPLOYEES,
1919-20 TO 1923-24.**

State.	1919-20.(a)	1920-21.(a)	1921-22.(a)	1922-23.(a)	1923-24.(a)
	%	%	%	%	%
New South Wales ..	5.25	5.02	5.41	5.44	5.11
Victoria ..	4.83	4.63	4.76	4.71	4.79
Queensland ..	4.55	4.64	4.38	4.81	4.91
South Australia ..	5.54	5.49	5.49	5.53	5.29
Western Australia ..	4.89	4.46	3.51	3.68	3.70
Tasmania ..	5.12	4.97	4.17	5.31	5.35
Australia ..	5.03	4.85	4.95	5.03	4.93

(a) See general note on first page of this Chapter.

4. Industries Employing Child Labour.—The employment of children is largely confined to a limited number of industries, the most important of which are specified in the next table, which shows the average number of children of each sex employed during 1923-24 in the several industries indicated.

CHILDREN EMPLOYED.—VARIOUS INDUSTRIES, 1923-24.

Class.	Industry.	N.S.W. 1923-24.		Victoria. 1923-24.		Q'land. 1923.		S. Aust. 1923-24.		W. Aust. 1923.		Tas. 1923-24.		Australia.	
		M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
III.	Bricks, tiles, pottery, and earthenware ..	216	2	80	6	21	..	18	..	25	11	9	..	369	19
IV.	Joinery, boxes, cases, etc.	88	2	179	2	36	2	48	..	21	..	15	..	387	6
"	Saw mills ..	89	1	14	..	61	..	13	1	34	1	23	..	234	3
V.	Engineering, ironworks, and foundries ..	350	21	439	4	65	1	151	10	76	..	17	..	1,098	36
"	Galvanized ironworking and tinsmithing ..	168	32	171	24	58	3	31	..	..	..	5	..	433	59
"	Railway carriage, railway and tramway workshops ..	59	1	106	..	4	..	35	..	4	..	..	..	208	1
VI.	Biscuits ..	219	234	92	72	9	8	7	13	19	3	20	21	366	351
"	Confectionery ..	118	300	48	67	37	52	5	35	4	15	43	43	255	512
"	Jams, pickles, sauces, etc.	28	43	69	48	10	7	25	24	2	1	43	22	177	145
"	Condiments, coffee, spices, etc. ..	38	52	2	3	..	2	74	4	11	6	..	..	125	67
"	Tobacco, cigars, etc. ..	67	131	54	17	..	..	..	..	2	10	..	..	123	158
VII.	Woollen and tweed mills ..	59	113	228	275	10	35	6	7	..	..	40	69	343	499
"	Boots and shoes ..	177	212	297	425	56	82	36	42	20	10	15	16	601	787
"	Clothing (tailoring and slop) ..	101	777	88	436	38	253	28	177	10	42	10	48	275	1,733
"	Dressmaking and millinery ..	7	413	19	634	1	129	..	151	2	38	..	39	29	1,404
"	Shirts, ties, scarves, etc.	15	407	22	439	16	234	1	60	2	19	..	11	56	1,170
"	Hosiery and knitted goods ..	24	206	22	274	..	3	..	15	..	11	..	4	46	513
VIII.	Printing and binding ..	440	237	389	87	216	70	63	40	54	12	23	9	1,185	455
"	Paper making, paper boxes, etc. ..	86	189	87	142	6	21	12	84	2	6	..	..	193	442
XI.	Coach and wagon building ..	58	1	71	1	24	..	17	..	11	..	10	..	191	2
"	Cycles and motors ..	229	7	177	1	61	1	232	6	36	..	30	..	765	15
XIII.	Billiard tables, cabinet making and furniture ..	139	3	216	7	59	9	73	..	29	..	21	1	537	20
XIV.	Chemicals, drugs, and medicines ..	31	91	12	39	1	7	4	22	2	2	..	1	50	162
XVIII.	Leather belting, etc. ..	92	86	40	31	6	5	4	32	..	..	2	2	144	156

5. Apprenticeship.—In all the States Acts are in force for the regulation of the age at which children may be employed in gainful occupations. Legislative provision is also made for the regulation of apprenticeship under the various State Factories Acts or Arbitration Acts. These Acts, while laying down general principles, leave to the wages tribunals the actual determination of the conditions under which apprentices may be employed.

§ 7. Salaries and Wages Paid and Value of Production.

[NOTE].—In all tables relating to Salaries and Wages paid in Factories the amounts given are exclusive of all sums drawn by working proprietors.

1. **General.**—The importance of the manufacturing industries of Australia is indicated by the fact that the total value of the output for 1923–24 was £348,577,583, of which amount the sum of £197,038,726 represents the value of the raw materials used, and £10,296,440 the value of the fuel and light used. The difference between the sum of the two latter amounts and the value of the output, viz., £141,242,417, represents the amount by which the value of the raw materials was enhanced in the process of manufacture. The total amount of salaries and wages paid in factories during 1923–24 was £77,278,265.

2. **Salaries and Wages Paid.**—(i) *Total Amount, 1923–24.* The total amount of salaries and wages paid during the year 1923–24 in various classes of factories in Australia is shown in the following table :—

SALARIES AND WAGES PAID IN FACTORIES, 1923–24.

Class of Industry.	N.S.W. 1923–24.	Victoria. 1923–24.	Q'land. 1923.	S. Aust. 1923–24.	W. Aust. 1923.	Tas. 1923–24.	Australia.
	£	£	£	£	£	£	£
I. Treating raw material, product of agricultural and pastoral pursuits, etc.	752,848	826,818	138,361	150,045	52,098	46,162	1,966,332
II. Treating oils and fats, animal, vegetable, etc.	313,879	188,311	28,207	51,538	20,889	2,765	605,589
III. Processes in stone, clay, glass, etc.	1,941,605	1,453,348	187,002	452,176	201,452	70,562	4,306,145
IV. Working in wood	1,903,779	2,147,018	1,028,888	385,952	1,122,628	408,427	6,996,692
V. Metal works, machinery, etc.	8,854,156	5,347,581	1,474,877	2,077,671	683,812	430,064	18,868,161
VI. Connected with food and drink, etc.	3,496,782	3,633,025	2,460,596	725,156	458,664	313,131	11,087,354
VII. Clothing and textile fabrics, etc.	3,970,694	6,429,313	864,015	662,596	321,859	179,852	12,428,329
VIII. Books, paper, printing, and engraving	2,375,153	2,430,759	666,200	430,336	284,532	158,372	6,345,352
IX. Musical instruments, etc.	180,433	105,628	..	8,571	3,694	..	298,326
X. Arms and explosives	100,443	87,155	..	548	..	..	188,146
XI. Vehicles and fittings, saddlery and harness, etc.	1,333,183	1,218,059	265,042	837,495	147,470	100,656	3,901,805
XII. Ship and boat building and repairing	1,264,032	89,340	15,552	64,244	2,544	6,427	1,442,139
XIII. Furniture, bedding, and upholstery	957,914	865,475	268,716	235,439	150,559	61,424	2,539,527
XIV. Drugs, chemicals, and by-products	554,519	544,938	19,556	170,195	82,983	6,018	1,378,209
XV. Surgical and other scientific instruments	47,012	29,438	14,887	8,235	4,500	..	104,072
XVI. Jewellery, timepieces, and plated ware	158,669	187,029	24,140	33,639	13,789	4,180	421,455
XVII. Heat, light & power	1,091,236	1,259,036	282,632	409,553	77,194	109,312	3,228,963
XVIII. Leatherware, n.e.l.	176,899	158,593	23,665	14,298	6,851	1,953	382,259
XIX. Minor wares, n.e.l.	299,758	471,220	2,584	9,711	5,441	596	789,310
Total ..	29,772,994	27,472,084	7,764,929	6,727,398	3,640,959	1,899,901	77,278,265

The maximum amount of salaries and wages paid in any particular class during 1923–24 was in Class V., the amount being £18,868,161, or 24.42 per cent. on the total amount; the minimum amount was in Class X., £104,072, or 0.13 per cent. on the total. The State in which the largest amount was paid was New South Wales.

(ii) *Totals and Averages, 1919-20 to 1923-24.* The following statement shows the total amount of salaries and wages paid, and the average amount paid per employee in each State, during each of the years 1919-20 to 1923-24. The figures are exclusive of working proprietors and of the amounts drawn from the business by them :—

SALARIES AND WAGES PAID IN FACTORIES.—TOTAL AND AVERAGE PER ANNUM PER EMPLOYEE, 1919-20 TO 1923-24.

Year. (a)	Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
		£	£	£	£	£	£	£
1919-20	Total amount paid ..	21,681,106	17,702,173	5,364,818	3,988,062	2,173,350	1,205,959	52,115,558
	Average per employee ..	154.87	135.52	135.86	141.63	145.24	126.03	143.65
1920-21	Total amount paid ..	25,618,591	21,377,216	6,718,905	4,866,211	2,870,567	1,480,228	62,931,718
	Average per employee ..	182.39	159.41	161.12	166.96	173.60	150.86	169.28
1921-22	Total amount paid ..	26,783,242	23,846,495	7,217,773	5,313,927	3,886,550	1,502,874	68,050,861
	Average per employee ..	186.21	172.84	177.12	177.76	191.94	156.93	179.24
1922-23	Total amount paid ..	27,050,730	25,547,192	7,447,959	5,943,745	3,500,625	1,642,901	71,133,162
	Average per employee ..	184.44	175.79	178.16	178.83	189.32	167.23	179.92
1923-24	Total amount paid ..	29,772,994	27,472,084	7,764,929	6,727,398	3,640,959	1,899,901	77,278,265
	Average per employee ..	194.08	184.80	179.21	188.17	190.22	163.60	187.61

(a) See general note on first page of this Chapter.

In comparing the figures in the preceding table, regard should be paid to the nature of certain industries which are carried on to a greater extent in some States than in others. In Victoria, for instance, there is a large number of hands employed in Class VII., comprising a heavy percentage of women and children. The highest average wage per employee in 1923-24 was paid in New South Wales, where the percentage of industries requiring highly-skilled labour is largest.

The salaries and wages paid in factories have advanced considerably during recent years in consequence of the rapid rise in the cost of living. During the past four years the average wage increased by £43.96, or 30.60 per cent., while the additional outlay for wage increases amounted in the aggregate to £18,000,000.

(iii) *Earnings of Males and Females, 1923-24.* The following table shows the approximate amount paid in salaries and wages to males and females in each class of industry in each State during the year 1923-24 :—

SALARIES AND WAGES.—MALE AND FEMALE FACTORY EMPLOYEES, 1923-24.

Class of Industry.	N.S.W. 1923-24.	Victoria. 1923-24.	Q'land. 1923.	S. Aust. 1923-24.	W. Aust. 1923.	Tas. 1923-24.	Australia.
MALES.							
I. Treating raw material product of agricultural and pastoral pursuits, etc. . .	£ 729,647	£ 822,577	£ 137,400	£ 149,073	£ 51,208	£ 46,062	£ 1,935,967
II. Treating oils and fats, animal, vegetable, etc. . .	275,006	172,174	26,592	48,368	20,415	2,443	544,998
III. Processes in stone, clay, glass, etc. . .	1,926,399	1,434,199	185,463	450,633	197,929	70,282	4,264,905
IV. Working in wood . .	1,886,289	2,130,638	1,018,833	381,114	1,121,409	407,737	6,945,970
V. Metal works, machinery, etc. . .	8,738,499	5,277,752	1,465,280	2,059,695	680,386	426,148	18,647,760

SALARIES AND WAGES.—MALE AND FEMALE FACTORY EMPLOYEES,
1923-24—*continued.*

Class of Industry.	N.S.W. 1923-24.	Victoria. 1923-24.	Q'land. 1923.	S. Aust. 1923-24.	W. Aust. 1923.	Tas. 1923-24.	Australia.
MALES—<i>continued.</i>							
VI. Connected with food and drink, etc. . .	£ 2,940,137	£ 3,100,534	£ 2,381,368	£ 653,816	£ 423,717	£ 270,077	£ 9,769,649
VII. Clothing and textile fabrics, etc. . .	1,823,643	2,908,702	382,082	270,372	122,852	89,067	5,596,718
VIII. Books, paper, printing and engraving . .	2,035,800	2,086,595	591,131	371,921	252,189	144,705	5,482,341
IX. Musical Instruments, etc. . .	170,392	103,132	..	8,397	3,544	..	285,515
X. Arms and explosives	99,565	71,195	..	548	..	..	171,308
XI. Vehicles and fittings, saddlery and harness, etc. . .	1,301,734	1,200,151	252,061	811,972	142,724	96,828	3,805,470
XII. Ship and boat building and repairing . .	1,257,572	89,038	15,552	64,244	2,544	6,427	1,435,377
XIII. Furniture, bedding, and upholstery . .	889,316	804,268	255,734	226,640	143,761	59,046	2,378,774
XIV. Drugs, chemicals, and by-products . .	468,476	468,586	12,397	159,418	78,596	5,360	1,192,833
XV. Surgical and other scientific instruments . .	42,158	28,021	14,392	7,848	4,065	..	96,484
XVI. Jewellery, timepieces, and plated ware . .	149,502	175,920	22,583	32,541	13,563	3,993	398,102
XVII. Heat, light, and power	1,082,382	1,189,525	277,428	400,444	76,728	108,566	3,135,073
XVIII. Leatherware, n.e.i. .	137,534	123,071	17,985	9,517	4,809	1,816	294,732
XIX. Minor wares, n.e.i. .	212,889	395,549	1,915	9,388	4,991	596	625,328
Total . .	26,166,890	22,581,677	7,058,196	6,115,958	3,345,430	1,739,153	67,007,304

FEMALES.

I. Treating raw material product of agricultural and pastoral pursuits, etc. . .	23,201	4,241	961	972	890	100	30,365
II. Treating oils and fats, animal, vegetable, etc. . .	38,873	16,137	1,615	3,170	474	322	60,591
III. Processes in stone, clay, glass, etc. . .	15,206	19,149	1,539	1,543	3,523	280	41,240
IV. Working in wood . .	17,540	16,380	10,055	4,838	1,219	690	50,722
V. Metal works, machinery, etc. . .	115,657	69,829	9,597	17,976	3,426	3,916	220,401
VI. Connected with food and drink, etc. . .	556,645	532,491	79,228	71,340	34,947	43,054	1,317,705
VII. Clothing and textile fabrics, etc. . .	2,147,051	3,520,611	481,933	392,224	199,007	90,785	6,831,611
VIII. Books, paper, printing and engraving . .	339,353	344,164	75,069	58,415	32,343	13,667	863,011
IX. Musical instruments, etc. . .	10,041	2,446	..	174	150	..	12,811
X. Arms and explosives	878	15,960	..	..	..	..	16,838
XI. Vehicles and fittings, saddlery and harness, etc. . .	31,449	17,908	12,981	25,523	4,746	3,828	96,435
XII. Ship and boat building and repairing . .	6,460	302	..	..	..	..	6,762
XIII. Furniture, bedding, and upholstery . .	68,598	61,207	12,982	8,790	6,798	2,378	160,753
XIV. Drugs, chemicals, and by-products . .	86,043	76,352	7,159	10,777	4,387	658	185,376
XV. Surgical and other scientific instruments . .	4,854	1,417	495	387	435	..	7,588
XVI. Jewellery, timepieces, and plated ware . .	9,167	11,109	1,566	1,098	226	187	23,353
XVII. Heat, light, and power	8,354	69,511	5,204	9,109	466	746	93,890
XVIII. Leatherware, n.e.i. .	39,365	35,522	5,680	4,781	2,042	137	87,527
XIX. Minor wares, n.e.i. .	86,869	75,671	669	323	450	..	163,982
Total . .	3,606,104	4,890,407	706,733	611,440	295,529	160,748	10,270,961

(iv) *Total and Average Earnings of Males and Females, 1919-20 to 1923-24.* Similar information for the last five years is given in the table hereunder:—

**SALARIES AND WAGES.—MALE AND FEMALE FACTORY EMPLOYEES,
1919-20 TO 1923-24.**

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
MALES.							
1919-20. <i>a</i> Amount paid .. £	19,128,348	14,483,166	4,909,725	3,605,180	2,000,474	1,116,679	45,243,572
Per cent. on total ..	88.23	81.82	91.52	90.40	92.05	92.60	86.81
Average per employee .. £	181.06	166.98	151.09	162.43	161.84	138.51	169.14
1920-21. <i>a</i> Amount paid .. £	22,766,216	17,668,917	6,163,744	4,430,269	2,047,957	1,376,822	55,058,925
Per cent. on total ..	88.87	82.65	91.81	91.04	92.25	93.01	87.49
Average per employee .. £	210.99	195.63	178.49	190.05	191.16	165.07	197.85
1921-22. <i>a</i> Amount paid .. £	23,466,566	19,497,451	6,596,101	4,827,612	3,155,091	1,388,741	58,931,562
Per cent. on total ..	87.62	81.76	91.39	90.85	93.17	92.41	86.60
Average per employee .. £	218.03	213.07	196.28	203.02	209.05	173.57	210.79
1922-23. <i>a</i> Amount paid .. £	23,456,421	20,799,146	6,761,882	5,392,340	3,217,347	1,499,750	61,146,886
Per cent. on total ..	86.71	81.41	91.06	90.72	91.91	91.29	85.96
Average per employee .. £	213.83	215.56	199.57	205.85	210.53	187.99	210.84
1923-24. <i>a</i> Amount paid .. £	26,166,890	22,581,677	7,058,196	6,115,958	3,345,430	1,730,153	67,007,304
Per cent. on total ..	87.89	82.20	90.90	90.91	91.88	91.54	86.71
Average per employee .. £	225.71	224.08	200.39	212.48	210.39	183.75	218.93
FEMALES.							
1919-20. <i>a</i> Amount paid .. £	2,552,848	3,219,007	455,093	382,882	172,876	89,280	6,871,086
Per cent. on total ..	11.77	18.18	8.48	9.60	7.95	7.40	13.19
Average per employee .. £	74.33	73.85	65.07	64.20	66.41	50.24	77.11
1920-21. <i>a</i> Amount paid .. £	2,852,375	3,708,299	550,161	435,942	222,611	103,406	7,872,793
Per cent. on total ..	11.13	17.35	8.19	8.96	7.75	6.99	12.51
Average per employee .. £	87.61	84.71	77.04	74.71	82.94	70.30	84.23
1921-22. <i>a</i> Amount paid .. £	3,316,676	4,349,044	621,672	486,315	231,494	114,133	9,119,299
Per cent. on total ..	12.38	18.24	8.61	9.15	6.83	7.59	13.40
Average per employee .. £	91.62	93.60	87.01	79.54	89.19	72.42	91.11
1922-23. <i>a</i> Amount paid .. £	3,594,309	4,748,046	666,077	551,405	283,278	143,151	9,986,266
Per cent. on total ..	13.29	18.59	8.94	9.28	8.09	8.71	14.04
Average per employee .. £	97.23	97.21	85.13	82.87	88.30	75.55	94.80
1923-24. <i>a</i> Amount paid .. £	3,606,104	4,890,407	706,733	611,440	295,529	160,748	10,270,961
Per cent. on total ..	12.11	17.80	9.10	9.09	8.12	8.46	13.29
Average per employee .. £	96.22	102.12	87.20	87.75	91.21	74.83	97.05

(a) See general note on first page of this Chapter.

(v) *Managers, Overseers, and Other Employees.* A further analysis of salaries and wages paid is given in the following table, the amounts paid to managers, overseers, etc., being differentiated from those paid to other employees. As previously mentioned, amounts drawn by working proprietors are excluded in all cases.

**SALARIES AND WAGES.—MANAGERS, OVERSEERS, AND OTHER FACTORY
EMPLOYEES, AUSTRALIA, 1923-24.**

Class of Industry.	Salaries and Wages Paid to—						
	Managers, Overseers, Accountants, and Clerks.		All other Employees.		All Employees.		
	Males.	Females.	Males.	Females.	Males.	Females.	Total.
I. Treating raw material product of agricultural pursuits, etc. . . .	£	£	£	£	£	£	£
II. Treating oils and fats, animal, vegetable, etc. . . .	243,324	10,915	1,692,643	19,450	1,935,967	30,365	1,966,332
III. Processes in stone, clay, glass, etc. . . .	113,665	16,222	431,333	44,369	544,998	60,591	605,589
IV. Working in wood . . .	444,101	21,697	3,820,804	19,543	4,264,905	41,240	4,306,145
V. Metal works, machinery, etc. . . .	739,635	41,906	6,206,335	8,816	6,945,970	50,722	6,996,692
VI. Connected with food and drink, etc. . . .	1,906,272	110,381	16,741,488	110,020	18,647,760	220,401	18,868,161
VII. Clothing and textile fabrics, etc. . . .	1,829,719	183,440	7,939,930	1,134,265	9,769,649	1,317,705	11,087,354
VIII. Books, paper, printing and engraving . . .	942,360	365,497	4,654,358	6,466,114	5,596,718	6,831,611	12,428,329
IX. Musical instruments, etc. . . .	1,050,497	181,343	4,431,844	681,668	5,482,341	863,011	6,345,352
X. Arms and explosives . . .	26,457	3,732	259,058	9,079	285,515	12,811	298,326
	34,013	1,550	137,295	15,288	171,308	16,838	188,146

SALARIES AND WAGES.—MANAGERS, OVERSEERS, AND OTHER
FACTORY EMPLOYEES, AUSTRALIA, 1923-24—continued.

Class of Industry.	Salaries and Wages Paid to—						
	Managers, Overseers, Accountants, and Clerks.		All Other Employees.		All Employees.		
	Males.	Females.	Males.	Females.	Males.	Females.	Total.
	£	£	£	£	£	£	£
XI. Vehicles and fittings, saddlery and harness, etc. . .	388,946	60,634	3,416,524	35,801	3,805,470	96,435	3,901,905
XII. Ship and boat building and repairing . .	160,891	5,600	1,274,486	1,102	1,435,377	6,702	1,442,139
XIII. Furniture, bedding, and upholstery . .	196,397	32,035	2,182,377	128,718	2,378,774	160,753	2,539,527
XIV. Drugs, chemicals, and by-products . .	275,026	42,495	917,807	142,881	1,192,833	185,376	1,378,209
XV. Surgical and other scientific instruments . .	15,708	2,857	80,776	4,731	96,484	7,588	104,072
XVI. Jewellery, timepieces, and plated ware . .	35,733	8,784	362,369	14,569	398,102	23,353	421,455
XVII. Heat, light, and power . .	634,531	42,939	2,500,542	50,951	3,135,073	93,890	3,228,963
XVIII. Leatherware, n.e.i. . .	56,369	8,564	238,363	78,963	294,732	87,527	382,259
XIX. Minor wares, n.e.i. . .	83,416	7,892	541,912	156,090	625,328	163,932	789,310
Total . .	9,177,060	1,148,483	57,830,244	9,122,478	67,007,304	10,270,961	77,278,265
Average paid per employee . .	331.78	134.79	207.71	93.75	218.93	97.05	187.61

3. Value of Fuel and Light Used.—(i) *Total Amount, 1923-24.* The expenditure in factories on fuel and light is of considerable importance; in 1923-24 it amounted to £10,296,440. The classes of industry in which fuel was most extensively used were Class V., Metal Works, Machinery, etc., £3,009,401; Class XVII., Heat, Light, Power, etc., £2,411,585, of which amount £2,144,164 was expended on generating electric light and power; Class VI., Connected with Food, Drink, etc., £1,712,217; and Class III., Stone, Clay, Glass, etc., £1,432,014. The following table shows the value of fuel and light used in the different classes of industry during 1923-24:—

VALUE OF FUEL AND LIGHT USED IN FACTORIES, 1923-24.

Class of Industry.	N.S.W. 1923-24.	Victoria. 1923-24.	Q'land. 1923.	S. Aust. 1923-24.	W. Aust. 1923.	Tas. 1923-24.	Australia.
	£	£	£	£	£	£	£
I. Treating raw material, product of agricultural and pastoral pursuits, etc. . .	120,728	110,062	19,250	18,997	7,281	984	277,302
II. Treating oils and fats, animal, vegetable, etc. . .	47,966	41,193	2,155	7,543	6,902	241	106,000
III. Processes in stone, clay, glass, etc. . .	637,750	494,219	38,323	176,412	60,355	24,955	1,432,014
IV. Working in wood . .	63,143	45,483	21,641	10,815	12,038	4,417	157,537
V. Metal works, machinery, etc. . .	2,019,781	317,294	143,959	315,165	41,633	171,569	3,009,401
VI. Connected with food and drink, etc. . .	557,053	565,840	336,198	142,793	79,167	31,166	1,712,217
VII. Clothing and textile fabrics, etc. . .	100,046	230,965	18,196	19,144	6,069	7,421	381,841
VIII. Books, paper, printing, engraving . .	87,813	106,515	22,247	15,396	7,999	3,614	243,584
IX. Musical instruments, etc. . .	3,440	2,196	..	215	25	..	5,876
X. Arms and explosives . .	3,640	8,010	..	10	..	..	11,660
XI. Vehicles and fittings, saddlery and harness, etc. . .	39,101	38,377	6,096	20,879	6,369	2,925	113,747
XII. Ship and boat building and repairing . .	60,480	5,319	265	5,356	35	97	71,552
XIII. Furniture, bedding, and upholstery . .	21,371	24,402	7,426	6,204	3,061	1,405	63,869
XIV. Drugs, chemicals, and by-products . .	50,512	68,049	1,755	30,074	8,489	244	159,123
XV. Surgical and other scientific instruments . .	1,230	1,109	510	373	117	..	3,339
XVI. Jewellery, timepieces, and plated ware . .	4,807	7,289	737	1,610	355	70	14,863
XVII. Heat, light, and power . .	1,287,294	641,963	89,487	238,819	139,827	16,195	2,411,585
XVIII. Leatherware, n.e.i. . .	2,239	5,107	350	284	347	37	8,364
XIX. Minor wares, n.e.i. . .	21,454	89,847	293	468	430	69	112,561
Total . .	5,129,848	2,803,230	708,888	1,008,557	380,499	265,409	10,296,440

(ii) *Total Amount, 1919-20 to 1923-24.* The following table gives the sums expended on fuel and light during the past five years :—

VALUE OF FUEL AND LIGHT USED IN FACTORIES, 1919-20 TO 1923-24.

Year.(a)	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
	£	£	£	£	£	£	£
1919-20 ..	2,710,666	1,723,220	531,612	558,802	222,334	112,555	5,859,189
1920-21 ..	3,608,744	2,184,096	766,590	704,775	273,061	155,222	7,692,488
1921-22 ..	3,983,730	2,329,760	668,224	798,495	324,619	151,553	8,256,381
1922-23 ..	4,021,068	2,443,681	690,656	948,455	361,990	193,765	8,659,615
1923-24 ..	5,123,848	2,803,239	708,888	1,008,557	380,499	265,409	10,296,404

(a) See general note on first page of this Chapter.

4. Value of Raw Materials Used.—(i) *Total Amount, 1923-24.* The value of raw materials worked up (*i.e.*, exclusive of fuel, lubricants, etc.) in factories in Australia during 1923-24 was £197,038,726, which represents 56.53 per cent. of the total value of the final output. (See next sub-section.) The following table shows the value of the raw materials worked up in various classes of industry in each State :—

VALUE OF RAW MATERIALS USED IN FACTORIES, 1923-24.

Class of Industry.	N.S.W. 1923-24.	Victoria. 1923-24.	Q'land. 1923.	S. Aust. 1923-24.	W. Aust. 1923.	Tas. 1923-24.	Australia.
	£	£	£	£	£	£	£
I. Treating raw material, product of agricultural and pastoral pursuits, etc. . . .	6,447,062	4,576,400	2,661,478	779,838	414,029	401,410	15,280,217
II. Treating oils and fats, animal, vegetable, etc. . . .	1,697,094	797,828	111,128	221,194	94,236	7,959	2,920,439
III. Processes in stone, clay, glass, etc. . .	1,711,041	698,677	147,841	285,068	110,464	15,399	2,968,490
IV. Working in wood . .	4,521,750	2,625,182	1,793,770	1,501,568	325,255	182,824	10,890,361
V. Metal works, machinery, etc. . . .	22,200,706	6,777,202	1,575,323	5,436,136	821,782	1,120,745	37,931,894
VI. Connected with food and drink, etc. . . .	30,355,853	24,207,742	12,630,017	5,345,458	2,388,752	1,454,246	76,382,068
VII. Clothing and textile fabrics, etc. . . .	6,890,198	12,808,006	1,886,873	1,127,257	652,490	260,448	23,634,272
VIII. Books, paper, printing, and engraving . .	2,836,685	2,523,505	488,488	467,818	235,842	109,410	6,661,748
IX. Musical instruments, etc. . . .	235,935	128,486	..	9,912	15,373	..	389,706
X. Arms and explosives .	18,440	180,450	..	1,200	..	..	200,090
XI. Vehicles and fittings, saddlery and harness, etc. . . .	1,237,069	1,232,117	221,893	1,107,084	198,793	84,473	4,081,429
XII. Ship and boat building and repairing . .	526,075	34,031	8,690	53,768	1,856	4,857	629,277
XIII. Furniture, bedding, and upholstery . .	1,706,542	1,334,592	390,774	302,834	100,806	54,251	3,970,799
XIV. Drugs, chemicals, and by-products . .	2,259,811	1,661,309	45,351	534,342	357,135	19,020	4,876,968
XV. Surgical and other scientific instruments . .	45,604	28,891	9,278	7,509	7,342	..	98,714
XVI. Jewellery, timepieces, and platedware . .	147,197	232,853	12,919	38,937	12,840	2,254	447,000
XVII. Heat, light, and power .	1,866,025	1,089,725	140,646	190,317	48,426	53,040	3,368,179
XVIII. Leatherware, n.e.l. .	361,065	369,345	40,792	32,180	17,460	1,722	822,564
XIX. Minor wares, n.e.l. .	504,848	931,533	4,785	20,736	4,668	441	1,466,511
Total ..	85,568,590	62,217,874	22,110,052	17,463,156	5,897,549	3,781,499	197,038,726

The largest value of raw materials used was in Class VI., "Connected with Food and Drink, etc.," the total being £76,382,063. The next in order of importance was Class V., "Metal Works, Machinery, etc.," in which raw materials valued at £37,931,894 were used. The minimum value appears in Class XV., "Surgical and other Scientific Instruments," the total being only £98,714.

(ii) *Total Amount, 1919-20 to 1923-24.* The following table presents particulars of the values of raw materials used in factories during the past five years :—

VALUE OF RAW MATERIALS USED IN FACTORIES, 1919-20 TO 1923-24.

Year.(a)	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
	£	£	£	£	£	£	£
1919-20 ..	81,188,497	65,563,104	10,386,068	12,970,957	5,051,114	3,563,137	187,722,877
1920-21 ..	91,104,505	65,401,425	24,073,200	14,375,430	6,677,414	4,234,308	205,866,282
1921-22 ..	82,090,396	60,352,561	24,808,420	14,087,930	6,087,693	2,983,265	190,410,265
1922-23 ..	77,222,401	62,658,163	21,403,740	16,015,552	5,553,347	3,229,460	186,082,663
1923-24 ..	85,568,595	62,217,874	22,110,052	17,463,156	5,897,549	3,781,499	197,038,726

(a) See general note on first page of this Chapter.

5. *Total Value of Output.* (i) *Total, 1923-24.* The value of the output of new goods manufactured and of repairs effected in factories of various classes in each State during 1923-24 is shown in the following table. The figures given represent not only the increase in value due to the process of manufacture, but also include the value of the raw materials and the fuel and light used. The difference between the sum of the values of the materials and the fuel and light used and the total output (see sub-section 6 hereof) is the real value of production from manufactories.

TOTAL VALUE OF OUTPUT OF FACTORIES, 1923-24.

Class of Industry.	N.S.W. 1923-24.	Victoria. 1923-24.	Q'land. 1923.	S. Aust. 1923-24.	W. Aust. 1923.	Tas. 1923-24.	Australia.
	£	£	£	£	£	£	£
I. Treating raw material, product of agricultural and pastoral pursuits, etc. ..	8,018,247	6,178,731	2,843,613	1,060,348	573,977	505,791	19,180,707
II. Treating oils and fats, animal, vegetable, etc. ..	2,657,048	1,289,619	204,758	342,603	139,712	13,236	4,646,976
III. Processes in stone, clay, glass, etc. ..	6,009,584	3,739,356	560,728	1,219,844	480,337	144,732	12,154,581
IV. Working in wood ..	7,704,765	6,236,360	3,428,612	2,106,580	1,766,460	757,884	22,000,661
V. Metal works, machinery, etc. ..	38,121,303	14,805,025	4,059,981	8,919,965	1,671,789	2,404,022	69,982,085
VI. Connected with food and drink, etc. ..	40,789,320	33,760,511	10,327,949	7,116,910	3,447,261	2,109,465	106,551,416
VII. Clothing and textile fabrics, etc. ..	13,684,772	23,617,447	3,249,288	2,165,117	1,148,927	554,412	44,419,963
VIII. Books, paper, printing, and engraving ..	7,064,326	7,135,502	1,906,692	1,176,992	823,738	387,434	18,494,684
IX. Musical instruments, etc. ..	521,549	277,009	..	29,314	20,154	..	848,026
X. Arms and explosives ..	150,614	338,247	..	1,850	..	..	490,711
XI. Vehicles and fittings, saddlery and harness, etc. ..	3,259,124	3,092,231	1,012,039	2,401,627	416,019	233,040	10,414,080
XII. Ship and boat building and repairing ..	1,979,858	143,065	33,963	155,392	4,828	15,005	2,332,111
XIII. Furniture, bedding, and upholstery ..	3,149,676	2,750,078	856,974	677,792	388,637	146,836	7,969,993
XIV. Drugs, chemicals, and by-products ..	4,277,601	2,814,280	100,070	865,547	597,335	29,438	8,684,271
XV. Surgical and other scientific instruments ..	124,247	80,139	36,819	32,044	14,008	..	287,257
XVI. Jewellery, timepieces, and plated ware ..	406,534	545,827	50,114	97,058	28,968	9,931	1,138,432
XVII. Heat, light, and power ..	6,775,898	4,785,548	1,096,117	1,196,499	412,055	484,054	14,750,171
XVIII. Leatherware, n.e.i. ..	652,764	645,642	88,059	50,308	29,410	4,683	1,470,866
XIX. Minor wares, n.e.i. ..	1,012,030	1,687,310	11,827	35,205	12,695	1,525	2,760,592
Total ..	146,359,260	113,921,927	38,867,603	29,650,995	11,976,310	7,801,488	348,577,583

New South Wales far exceeds the other States in respect of the total value of output, the value being £146,359,260, or 41.99 per cent. on the total for all States. Next in order of value is Victoria, which produced 32.68 per cent.; the value of the output of Queensland was 11.15 per cent.; of South Australia 8.51 per cent.; of Western Australia 3.43 per cent.; and of Tasmania 2.24 per cent. The two most important classes in order of value of output (Classes VI. and V.) are the same as in order of value of raw materials used.

(ii) *Totals and Averages, 1919-20 to 1923-24.* The following statement shows the value of output of factories, value per employee, and value per head of mean population in each State during the five years ended 1923-24 :—

TOTAL VALUE OF OUTPUT OF FACTORIES, 1919-20 TO 1923-24.

Year.(a)	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
TOTAL.							
	£	£	£	£	£	£	£
1919-20 ..	123,213,480	101,475,363	32,452,744	20,454,539	8,723,928	6,216,554	292,536,608
1920-21 ..	137,841,386	106,008,294	39,190,242	22,358,109	11,443,080	7,151,972	323,993,088
1921-22 ..	132,820,065	106,243,181	40,334,298	23,854,857	11,291,739	5,796,625	320,340,765
1922-23 ..	132,735,140	111,286,343	37,824,101	26,903,775	11,321,551	6,426,226	326,497,136
1923-24 ..	146,359,260	113,921,927	38,867,603	29,650,995	11,976,310	7,801,488	348,577,583

PER EMPLOYEE.

	£	£	£	£	£	£	£
1919-20 ..	853	743	794	695	566	621	777
1920-21 ..	951	753	907	735	672	699	838
1921-22 ..	892	733	955	765	623	572	810
1922-23 ..	872	729	871	775	593	622	792
1923-24 ..	917	730	865	795	608	638	811

PER HEAD OF MEAN POPULATION.

	£	£	£	£	£	£	£
1919-20 ..	60.44	67.51	44.87	42.48	27.27	30.33	55.42
1920-21 ..	65.90	69.38	52.54	45.54	34.67	34.00	59.96
1921-22 ..	62.42	68.51	52.87	47.48	33.83	27.18	58.27
1922-23 ..	61.09	69.98	48.43	52.42	33.33	29.92	58.11
1923-24 ..	66.24	70.09	48.42	56.51	34.39	35.61	60.76

(a) See general note on first page of this Chapter.

6. Value Added in Process of Manufacture.—(i) *Total in Classes, 1923-24.* The difference between the figures given in sub-section 5 and the sum of the corresponding figures in sub-sections 3 and 4 represents the amount added to the value of the raw materials by the process of manufacture. This is the real measure of the value of production of manufacturing industries. The following table shows the value added in this manner during 1923-24 in each State for the various classes of factories :—

VALUE ADDED IN PROCESS OF MANUFACTURE, 1923-24.

Class of Industry.	N.S.W. 1923-24.	Victoria. 1923-24.	Q'land. 1923.	S. Aust. 1923-24.	W. Aust. 1923.	Tas. 1923-24.	Australia.
	£	£	£	£	£	£	£
I. Treating raw material, product of agricultural and pastoral pursuits, etc. . . .	1,450,457	1,492,269	162,885	261,513	152,667	103,397	3,623,188
II. Treating oils and fats, animal, vegetable, etc. . . .	911,988	450,598	91,475	113,866	38,574	5,036	1,611,537
III. Processes in stone, clay, glass, etc. . . .	3,660,793	2,546,460	374,564	758,384	309,518	104,378	7,754,077
IV. Working in wood . . .	3,119,866	3,565,695	1,673,195	594,197	1,429,167	570,643	10,952,763
V. Metal works, machinery, etc. . . .	13,900,816	7,710,529	2,340,699	3,168,664	808,374	1,111,708	29,040,700
VI. Connected with food and drink, etc. . . .	9,876,414	8,986,929	6,361,734	1,628,659	979,342	624,053	28,457,131
VII. Clothing and textile fabrics, etc. . . .	6,694,528	10,578,476	1,344,219	1,018,716	490,368	277,543	20,403,850
VIII. Books, paper, printing, and engraving . . .	4,139,828	4,505,482	1,395,957	693,778	579,897	274,410	11,589,352
IX. Musical instruments, etc. . . .	282,174	146,327	..	19,187	4,756	..	452,444
X. Arms and explosives . . .	128,534	149,787	..	640	..	..	278,961
XI. Vehicles and fittings, saddlery and harness, etc. . . .	1,982,954	1,821,737	784,050	1,273,664	210,857	145,642	6,218,904
XII. Ship and boat building and repairing . . .	1,393,303	103,715	25,008	96,268	2,937	10,051	1,631,282
XIII. Furniture, bedding, and upholstery . . .	1,421,763	1,391,084	458,774	368,754	194,770	91,180	3,926,325
XIV. Drugs, chemicals, and by-products . . .	1,967,278	1,084,922	52,964	301,131	231,711	10,174	3,648,180
XV. Surgical & other scientific instruments . . .	77,323	50,139	27,031	24,162	6,549	..	185,204
XVI. Jewellery, timepieces, and plated ware . . .	254,530	305,685	36,458	56,511	15,773	7,607	676,564
XVII. Heat, light, and power . . .	3,622,579	3,073,860	865,984	769,363	223,802	414,819	8,970,407
XVIII. Leatherware, n.e.i. . .	289,460	271,190	46,917	17,844	11,603	2,924	639,938
XIX. Minor wares, n.e.i. . .	486,228	665,930	6,749	14,001	7,597	1,015	1,181,520
Total . . .	55,660,816	48,900,814	16,048,663	11,179,282	5,698,262	3,754,580	141,242,417

(ii) *Totals and Averages, 1919-20 to 1923-24.* The amount of the value added is in much the same order as in the case of value of output, the six most important classes being V., VI., VII., VIII., IV., and XVII., in the order named. The value added to raw material by process of manufacture and the amount per employee and per head of mean population are shown in the following table for the years 1919-20 to 1923-24 :—

**FACTORIES.—VALUE ADDED IN PROCESS OF MANUFACTURE,
1919-20 TO 1923-24.**

Year.(a)	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
VALUE.							
	£	£	£	£	£	£	£
1919-20 . . .	39,314,317	34,189,039	12,535,064	6,924,780	3,450,480	2,540,862	98,954,542
1920-21 . . .	43,128,137	38,422,773	14,350,452	7,277,904	4,492,605	2,782,442	110,434,313
1921-22 . . .	46,745,939	43,560,860	14,857,654	8,968,432	4,879,427	2,661,807	121,674,119
1922-23 . . .	51,491,671	46,184,499	15,729,705	9,939,768	5,406,214	3,003,001	131,754,858
1923-24 . . .	55,660,816	48,900,814	16,048,663	11,179,282	5,698,262	3,754,580	141,242,417

(a) See general note on first page of this Chapter.

FACTORIES.—VALUE ADDED IN PROCESS OF MANUFACTURE, 1919-20 TO 1923-24—continued.

Year (a).	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
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PER EMPLOYEE.

	£	£	£	£	£	£	£
1919-20 ..	272	250	307	235	224	254	263
1920-21 ..	297	273	332	239	264	270	286
1921-22 ..	314	300	352	288	269	263	308
1922-23 ..	338	303	362	286	283	291	319
1923-24 ..	349	313	357	300	289	307	328

PER HEAD OF MEAN POPULATION.

	£	£	£	£	£	£	£
1919-20 ..	19.28	22.75	17.33	14.38	10.78	12.40	18.75
1920-21 ..	20.62	25.15	19.24	14.82	13.61	13.13	20.44
1921-22 ..	21.97	28.09	19.47	17.85	14.62	12.48	22.13
1922-23 ..	23.70	29.00	20.14	19.37	15.92	13.98	23.45
1923-24 ..	25.19	30.09	19.99	21.30	16.36	17.14	24.62

(a) See general note on first page of this Chapter.

7. Value of Output and Cost of Production.—As the total value of the output for Australia for 1923-24 was estimated at £348,577,583, there remained, after payment of £197,038,726, the value of the raw materials used, of £77,278,265 for salaries and wages, and of £10,296,440 for fuel, the sum of £63,964,152 to provide for all other expenditure and profits. The following table gives corresponding particulars for each State, expressed absolutely, and as percentages on the total value of the output for the year 1923-24:—

FACTORIES.—VALUE OF OUTPUT AND COST OF PRODUCTION, 1923-24.

State.	Raw Materials Used.	Fuel and Light.	Salaries and Wages.	All other Expenditure, Interest, and Profits.	Total Value of Output.
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VALUE AND COST, ETC.

	£	£	£	£	£
New South Wales, 1923-24	85,568,596	5,129,848	29,772,994	25,887,822	146,359,260
Victoria, 1923-24 ..	62,217,874	2,803,239	27,472,084	21,428,730	113,921,927
Queensland, 1923 ..	22,110,052	708,888	7,764,929	8,283,734	38,867,603
South Australia, 1923-24 ..	17,463,156	1,008,557	6,727,398	4,451,884	29,650,995
Western Australia, 1923 ..	5,897,549	380,499	3,640,959	2,057,303	11,976,310
Tasmania, 1923-24 ..	3,781,499	265,409	1,899,901	1,854,679	7,801,488
 Australia	 197,038,726	 10,296,440	 77,278,265	 63,964,152	 348,577,583

PERCENTAGE OF COSTS, ETC., ON TOTAL VALUE.

	%	%	%	%	%
New South Wales, 1923-24	58.46	3.51	20.34	17.69	100.00
Victoria, 1923-24 ..	54.62	2.46	24.11	18.81	100.00
Queensland, 1923 ..	56.89	1.82	19.98	21.31	100.00
South Australia, 1923-24 ..	58.90	3.40	22.69	15.01	100.00
Western Australia, 1923 ..	49.24	3.18	30.40	17.18	100.00
Tasmania, 1923-24 ..	48.47	3.40	24.36	23.77	100.00
 Australia	 56.53	 2.95	 22.17	 18.35	 100.00

§ 8. Value of Land, Buildings, Plant, and Machinery.

1. General.—As an indication of the permanent character and stability of the industries which have been established in Australia, it may be noted that the values of land and buildings and of plant and machinery used in the factories are rapidly increasing. Thus, for the whole of Australia the total value of land and buildings and plant and machinery has increased from 1919–20 to 1923–24 by £69,097,435, i.e., from £113,017,165 to £182,114,600, or at the rate of £17,274,359 per annum.

The following statement shows the values of land and buildings and of plant and machinery used in connexion with manufacturing industries in each State during the year 1923–24 :—

VALUE OF LAND, BUILDINGS, PLANT, AND MACHINERY, 1923–24.

Value of—	N.S.W. 1923–24.	Victoria. 1923–24.	Q'land. 1923.	S. Aust. 1923–24.	W. Aust. 1923.	Tasmania. 1923–24.	Australia.
	£	£	£	£	£	£	£
Land and buildings	37,979,192	24,972,560	7,284,212	6,312,553	4,206,874	1,806,670	82,562,061
Plant and machinery	41,141,890	28,223,915	12,321,440	6,929,821	4,496,082	6,439,391	99,552,539
Total ..	79,121,082	53,196,475	19,605,652	13,242,374	8,702,956	8,246,061	182,114,600

The total capital invested in land, buildings, plant, and machinery in manufacturing industries in Australia during the year 1923–24 was approximately £182,114,600 (or £31 14s. 11d. per head of population); of that sum £82,562,061 was invested in land and buildings occupied as manufactories, the remaining £99,552,539 being the value of the plant and machinery used in connexion therewith.

2. Value of Land and Buildings.—(i) *Total, Australia, 1919–20 to 1923–24.* The value of the land and buildings occupied in connexion with manufacturing industries may be conveniently classified according to the nature of the industry concerned.

The following table shows for Australia as a whole the approximate values of land and buildings occupied in connexion with manufacturing industries of various classes during each year from 1919–20 to 1923–24 inclusive :—

VALUE OF LAND AND BUILDINGS.—AUSTRALIA, 1919–20 TO 1923–24.

Class of Industry.	1919–20. <i>a</i>	1920–21. <i>a</i>	1921–22. <i>a</i>	1922–23. <i>a</i>	1923–24. <i>a</i>
	£	£	£	£	£
I. Treating raw material, product of agricultural and pastoral pursuits, etc.	1,588,513	1,811,005	1,910,816	1,983,100	2,085,336
II. Treating oils and fats, animal, vegetable, etc.	614,877	680,763	741,683	831,004	952,566
III. Processes in stone, clay, glass, etc.	2,216,901	2,814,447	3,067,776	3,242,782	3,592,378
IV. Working in wood	2,622,071	3,061,888	3,359,738	3,889,858	4,101,394
V. Metal works, machinery, etc.	8,997,496	10,409,753	10,607,622	11,396,988	12,990,237
VI. Connected with food and drink, etc.	13,411,552	14,218,716	15,306,571	17,064,684	18,277,106
VII. Clothing and textile fabrics, etc.	6,876,671	8,265,497	10,122,483	11,588,846	13,247,960
VIII. Books, paper, printing, and engraving	4,270,008	4,738,597	5,158,723	6,132,123	6,747,855
IX. Musical instruments, etc.	134,462	195,072	226,751	304,432	254,266
X. Arms and explosives	264,020	275,482	277,562	207,500	298,217
XI. Vehicles and fittings, saddlery and harness, etc.	2,467,633	3,093,034	3,576,519	4,145,937	5,166,587
XII. Ship and boat building and repairing	1,122,468	1,391,113	1,860,720	1,796,690	1,789,464
XIII. Furniture, bedding, and upholstery	1,325,762	1,663,270	1,839,005	2,109,655	2,498,679
XIV. Drugs, chemicals, and by-products	1,446,721	1,687,297	2,059,410	2,171,915	2,351,728
XV. Surgical and other scientific instruments	104,628	132,161	156,048	189,777	221,256
XVI. Jewellery, timepieces, and plated ware	425,214	487,763	578,963	580,094	620,686
XVII. Heat, light, and power	4,342,913	4,867,348	5,138,371	5,277,183	6,102,870
XVIII. Leatherware, n.e.l.	231,073	304,606	319,094	359,636	394,402
XIX. Minor wares, n.e.l.	554,588	733,756	1,022,793	1,108,904	860,074
Total ..	53,017,571	60,831,468	67,322,458	74,381,308	82,562,061

(a) See general note on first page of this Chapter.

As shown in the above table, the total net increase during the four years was £29,544,490, or an annual average of £7,386,123. The largest increases were in Classes VII., VI., V., XI., and VIII., and amounted to £6,371,289, £4,865,554, £4,001,741, £2,698,954, and £2,477,847 respectively.

(ii) *Value in each State, 1923-24.* The following table gives similar information for each State for the past year :—

VALUE OF LAND AND BUILDINGS.—STATES, 1923-24.

Class of Industry.	N.S.W. 1923-24.	Vic. 1923-24.	Q'land. 1923.	S. Aust. 1923-24.	W. Aust. 1923.	Tas. 1923-24.	Australia.
	£	£	£	£	£	£	£
I. Treating raw material, product of agricultural and pastoral pursuits, etc. . .	907,119	836,860	134,223	123,421	67,878	15,835	2,085,336
II. Treating oils and fats, animal, vegetable, etc. . .	618,801	190,255	48,583	62,434	20,651	11,842	952,566
III. Processes in stone, clay, glass, etc. . .	1,901,892	926,520	169,393	350,455	191,770	52,348	3,592,378
IV. Working in wood . .	1,850,433	923,730	413,377	256,425	532,160	125,269	4,101,394
V. Metal works, machinery, etc. . .	6,910,193	3,125,580	750,491	1,225,674	749,235	238,064	12,999,237
VI. Connected with food and drink, etc. . .	6,833,172	4,970,855	3,440,340	1,277,843	1,150,683	604,213	18,277,106
VII. Clothing and textile fabrics, etc. . .	5,410,578	5,687,050	727,918	688,655	375,531	349,228	13,247,960
VIII. Books, paper, printing, and engraving . .	3,166,923	2,060,435	644,629	489,197	303,994	82,677	6,747,855
IX. Musical instruments, etc. . .	123,946	117,235	..	7,235	5,850	..	254,266
X. Arms and explosives . .	90,237	204,480	..	3,500	..	..	298,217
XI. Vehicles and fittings, saddlery and harness, etc. . .	2,473,491	1,295,055	279,530	714,856	260,496	143,159	5,166,587
XII. Ship and boat building and repairing . .	1,491,639	232,275	9,927	49,423	2,735	3,465	1,789,464
XIII. Furniture, bedding, and upholstery . .	988,221	883,425	238,124	195,978	140,349	52,582	2,498,679
XIV. Drugs, chemicals, and by-products . .	1,289,671	667,140	26,787	233,180	115,775	19,175	2,351,728
XV. Surgical and other scientific instruments . .	106,325	52,055	26,532	20,040	16,304	..	221,256
XVI. Jewellery, timepieces, and plated ware . .	260,672	235,520	31,354	48,746	27,210	17,184	620,686
XVII. Heat, light, and power . .	3,077,981	1,888,010	307,908	528,676	210,998	89,297	6,102,870
XVIII. Leatherware, n.e.i. . .	188,674	156,900	25,246	9,810	12,540	1,232	394,402
XIX. Minor wares, n.e.i. . .	280,224	519,180	9,850	27,005	22,715	1,100	860,074
Total . .	37,979,192	24,972,560	7,284,212	6,312,553	4,206,874	1,806,670	82,562,061

The maximum value for Australia of land and buildings in any particular class was in Class VI., amounting to £18,277,106, or 22.14 per cent. on the total value. The next in order of importance were Classes VII., V., VIII., and XVII., in which the values were £13,247,960, £12,999,237, £6,747,855, and £6,102,870 respectively. The sum of the values for the five classes mentioned amounted to £57,375,028, or 69.49 per cent. on the total value for all classes.

(iii) *Value in each State, 1919-20 to 1923-24.* The total value of factory land and buildings at the end of each year from 1919-20 to 1923-24 is given hereunder.

VALUE OF LAND AND BUILDINGS, 1919-20 TO 1923-24.

Year.(a)	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
	£	£	£	£	£	£	£
1919-20 . .	24,108,890	14,957,535	5,886,215	3,977,099	3,132,014	955,768	53,017,571
1920-21 . .	28,428,917	17,313,350	6,261,266	4,495,667	3,350,608	981,600	60,831,468
1921-22 . .	32,052,303	19,810,176	6,373,504	4,711,022	3,206,295	1,169,164	67,322,458
1922-23 . .	34,559,510	22,428,525	6,615,350	5,324,484	4,001,366	1,452,073	74,381,308
1923-24 . .	37,979,192	24,972,560	7,284,212	6,312,553	4,206,874	1,806,670	82,562,061

(a) See general note on first page of this Chapter.

Since 1919-20 there has been a general increase throughout Australia, the States showing the greatest progress being New South Wales, Victoria, and South Australia, with annual average increases of £3,467,576, £2,503,744, and £593,863 respectively.

3. Value of Plant and Machinery.—(i) *Total, Australia, 1919-20 to 1923-24.* The following table shows for Australia as a whole the approximate value of plant and machinery used in factories during each year from 1919-20 to 1923-24 inclusive :—

VALUE OF PLANT AND MACHINERY.—AUSTRALIA, 1919-20 TO 1923-24.

Class of Industry.	1919-20.(a)	1920-21.(a)	1921-22.(a)	1922-23.(a)	1924-24.(a)
	£	£	£	£	£
I. Treating raw material, product of agricultural and pastoral pursuits, etc.	1,668,023	1,823,119	1,915,266	2,064,189	2,170,405
II. Treating oils and fats, animal, vegetable, etc.	712,583	829,390	881,060	1,035,461	1,147,029
III. Processes in stone, clay, glass, etc.	2,853,294	3,565,083	4,281,438	4,841,188	5,462,076
IV. Working in wood	3,398,146	4,083,711	4,543,992	4,734,078	5,291,155
V. Metal works, machinery, etc.	11,959,693	14,688,625	15,833,262	16,701,195	18,410,074
VI. Connected with food and drink, etc.	14,532,708	16,472,128	18,037,602	20,214,770	20,948,905
VII. Clothing and textile fabrics, etc.	3,059,732	3,781,164	4,840,385	5,775,392	6,722,006
VIII. Books, paper, printing, and engraving	3,684,858	4,246,439	4,890,224	5,800,029	6,706,697
IX. Musical instruments, etc.	31,302	58,078	66,274	86,660	94,453
X. Arms and explosives	327,700	304,800	271,845	216,667	252,658
XI. Vehicles and fittings, saddlery and harness, etc.	627,087	853,259	941,849	1,047,440	1,277,937
XII. Ship and boat building and repairing	1,711,746	1,520,756	2,161,809	2,035,576	2,045,117
XIII. Furniture, bedding, and upholstery	369,738	466,952	505,870	559,354	673,810
XIV. Drugs, chemicals, and by-products	1,264,703	1,497,619	1,646,119	1,785,912	2,094,340
XV. Surgical and other scientific instruments	23,257	32,299	36,542	39,577	45,919
XVI. Jewellery, timepieces, and plated ware	103,690	114,892	125,764	137,512	146,907
XVII. Heat, light, and power	13,127,358	13,515,725	16,032,361	17,887,928	25,030,504
XVIII. Leatherware, n.e.l.	48,136	66,544	70,251	91,306	106,574
XIX. Minor wares, n.e.l.	490,840	734,687	997,767	1,027,676	925,073
Total	59,999,594	68,655,270	78,085,680	86,081,910	99,552,539

(a) See general note on first page of this Chapter.

During the past four years there has been a steady and substantial net increase amounting in all to £39,552,945, or an annual average of £9,888,236. All classes of industry participated with the exception of Arms and Explosives, the largest increase being in Class XVII., "Heat, Light, and Power," where it amounted to £11,903,146, while the next in order were Class V., "Metal Works, Machinery, etc.," with an increase of £6,450,381, and Class VI., "Connected with Food and Drink, etc.," £6,416,197.

(ii) *Value in each State, 1919-20 to 1923-24.* The figures in the previous table refer to Australia as a whole. In the following table results are shown for each State, and it will be seen that the increase is general throughout the States. New South Wales shows by far the largest advance, viz., £14,775,807; while Victoria comes next with £12,376,980.

VALUE OF PLANT AND MACHINERY.—STATES, 1919-20 TO 1923-24.

Year.(a)	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Total.
	£	£	£	£	£	£	£
1919-20	26,366,083	15,846,935	8,867,803	3,931,562	2,938,889	2,048,322	59,999,594
1920-21	31,115,444	18,179,385	9,615,509	4,473,247	3,340,158	1,931,527	68,655,270
1921-22	35,229,530	21,182,110	10,253,104	4,896,264	3,596,877	2,927,795	78,085,680
1922-23	37,548,766	23,094,715	11,098,375	5,519,035	4,218,550	3,702,469	86,081,910
1923-24	41,141,890	28,223,015	12,321,440	6,929,821	4,496,082	6,439,391	99,552,539

(a) See general note on first page of this Chapter.

(iii) *Value according to Industry, 1923-24.* The following table shows the value of plant and machinery used in factories in each State during 1923-24, classified according to the nature of the industry in which used:—

VALUE OF PLANT AND MACHINERY.—INDUSTRIES, 1923-24.

Class of Industry.	N.S.W. 1923-24.	Vic. 1923-24.	Q'land. 1923.	S. Aust. 1923-24.	W. Aust. 1923.	Tas. 1923-24.	Australia.
	£	£	£	£	£	£	£
I. Treating raw material, product of agricultural and pastoral pursuits, etc. . .	984,932	730,750	184,266	119,461	79,190	71,806	2,170,405
II. Treating oils and fats, animal, vegetable, etc. . .	657,528	254,785	57,373	135,217	36,060	6,066	1,147,029
III. Processes in stone, clay, glass, etc. . .	2,926,980	1,095,840	312,087	599,010	293,975	235,084	5,462,976
IV. Working in wood . .	1,583,959	1,195,735	754,555	162,953	1,284,309	309,644	5,291,155
V. Metal works, machinery, etc. . .	10,742,607	3,165,515	1,127,777	1,040,371	566,059	1,767,745	18,410,074
VI. Connected with food and drink, etc. . .	7,064,161	4,985,775	6,420,657	1,174,558	920,722	383,032	20,948,905
VII. Clothing and textile fabrics, etc. . .	2,023,155	3,816,925	274,785	218,070	76,652	312,419	6,722,006
VIII. Books, paper, printing, and engraving . .	3,031,661	2,414,725	457,257	379,101	295,878	128,075	6,706,697
IX. Musical instruments, etc. . .	57,544	34,360	..	1,904	645	..	94,453
X. Arms and explosives . .	33,533	218,775	..	350	..	..	252,658
XI. Vehicles and fittings, saddlery and harness, etc. . .	506,860	322,125	75,784	293,470	52,828	26,870	1,277,937
XII. Ship and boat building and repairing . .	1,829,957	102,530	31,195	76,200	3,060	2,175	2,045,117
XIII. Furniture, bedding and upholstery . .	258,874	207,615	84,340	61,013	39,145	22,823	673,810
XIV. Drugs, chemicals, and by-products . .	880,288	612,245	29,710	419,212	150,085	2,800	2,094,340
XV. Surgical and other scientific instruments . .	19,058	13,640	6,024	5,394	1,803	..	45,919
XVI. Jewellery, timepieces, and plated ware . .	54,935	68,460	6,329	12,443	2,749	1,991	146,907
XVII. Heat, light, and power . .	8,200,851	8,269,825	2,492,283	2,223,369	677,915	3,166,261	25,030,504
XVIII. Leatherware, n.e.i. . .	40,735	50,045	3,794	3,750	7,830	420	106,574
XIX. Minor wares, n.e.i. . .	244,272	664,245	3,224	3,975	7,177	2,180	925,073
Total . .	41,141,890	28,223,915	12,321,440	6,929,821	4,496,082	6,439,391	99,552,539

The greatest value for any particular class of industry is for Class XVII., "Heat, Light, and Power," and amounts to £25,030,504, or 25.15 per cent. on the total for all classes. The next in order of importance is Class VI., "Connected with Food and Drink, etc.," amounting to £20,948,905, or 21.04 per cent. on the total, followed by Class V., "Metal Works, Machinery, etc.," which amounts to £18,410,074, or 18.49 per cent. on the total value. The total for these three classes amounts to £64,389,483, or 64.68 per cent. on the total value for all classes.

§ 9. Individual Industries.

1. *General.*—The preceding remarks and tables furnish a general view of the recent development of particular classes of industries in Australia treated under the nineteen categories adopted by the Conference of Statisticians in 1906. In order to make the information complete, it is necessary to furnish details of the development of individual industries. While it is not possible, within the limits of this work, to give a full and detailed account of all the manufacturing industries of Australia, it is proposed to deal herein with such particular industries as are of special importance by reason of the number of persons employed, the number of factories, the amount of capital invested therein, the value of the production, or other features of special interest. In cases where there are only one or two establishments of a particular class in any State, returns relative to output are not published, in order to avoid disclosing information as to the operations of individual factories.

2. Tanneries.—(i) *Details for each State, 1923-24.* In Class I. the most important industry is tanning. Formerly the production of tanneries in Australia was confined to the coarser class of leathers, but the tanning of the finer skins is now undertaken with satisfactory results. The position of the industry in the several States is as follows:—

TANNERIES, 1923-24.

Items.	N.S.W. 1923-24.	Vic. 1923-24.	Q'land. 1923.	S. Aust. 1923-24.	W.A. 1923.	Tas. 1923-24.	Aus- tralia.
Number of factories	77	51	17	10	7	4	166
Number of employees	1,317	2,480	328	189	114	57	4,485
Actual horse-power of engines employed ..	2,717	4,217	455	353	282	158	8,182
Approx. value of land and buildings £	292,498	432,810	26,947	28,014	26,520	11,423	818,212
Approx. value of plant and machinery £	209,705	383,820	37,995	22,223	22,990	7,596	684,329
Total amount of wages paid during year £	283,144	550,153	58,364	39,338	21,862	11,702	964,563
Value of fuel used	22,930	47,132	3,788	4,034	2,006	227	80,117
Value of raw material worked up ..	1,341,233	1,795,692	238,449	93,853	84,361	76,610	3,630,198
Total value of output	1,908,462	2,794,944	364,648	169,323	132,281	106,298	5,475,956
Value added in process of manufacture £	544,299	952,120	122,411	71,436	45,914	29,461	1,765,641

(ii) *Development in Australia, 1919-20 to 1923-24.* The development of the tanning industry during the period 1919-20 to 1923-24 is shown in the following table:—

TANNERIES.—AUSTRALIA, 1919-20 TO 1923-24.

Items.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
Number of factories	160	164	164	163	166
Number of employees	4,147	4,026	4,438	4,542	4,485
Actual horse-power of engines used ..	6,367	6,868	7,697	7,740	8,182
Approx. value of land and buildings £	552,521	684,892	721,699	769,328	818,212
Approx. value of plant and machinery £	422,976	520,400	581,008	627,560	684,329
Total amount of wages paid	777,368	825,751	935,009	963,526	964,563
Value of fuel used	60,981	62,247	72,581	75,064	80,117
Value of raw materials worked up ..	6,837,835	4,596,271	3,684,000	3,765,981	3,630,198
Value of final output	8,772,336	6,179,417	5,451,596	5,568,358	5,475,956
Value added in process of manufacture £	1,873,520	1,520,899	1,695,015	1,727,313	1,765,641

The above table shows increases in the number of factories, hands employed, and the equipment of the establishments in the tanning industry during the past four years. Owing to fluctuations in prices the financial figures in respect of materials used and output reveal a decline, whereas the industry has made progress, the production of leather having increased from 50,535,615 lbs. in 1919-20 to 51,957,999 lbs. in 1923-24.

(iii) *Raw Materials Used and Production, 1923-24.* The quantities of raw materials used and leather produced in tanneries in each State are shown in the following table:—

TANNERIES.—RAW MATERIALS USED AND PRODUCTION, 1923-24.

Particulars.	N.S.W. 1923-24.	Victoria. 1923-24.	Q'land. 1922.	S. Aust. 1923-24.	W. Aust. 1923.	Tas. 1923-24.	Australia.
Hides and calf skins No.	950,913	1,315,760	165,353	57,948	48,285	17,681	2,555,940
Sheep pelts	1,794,587	1,518,910	77,530	68,328	..	11,800	3,471,155
Other skins	508,642	868,325	182,627	7,892	9,591	1,050	1,578,127
Bark Ton	11,015	13,166	2,529	1,111	1,036	419	29,276
Leather made Lb.	20,644,084	22,889,116	4,561,291	1,389,262	1,817,044	657,202	51,957,999
Basils produced	1,946,195	1,514,665	75,398	69,298	..	7,400	3,612,956

3. Fellmongering and Wool-scouring Works.—(i) *Details for each State, 1923-24.* The next industry in importance in Class I. is that of fellmongering and wool-scouring, one of the earliest industries established in Australia. The following table gives particulars of the industry in each State during the past year :—

FELLMONGERING AND WOOL-SCOURING WORKS, 1923-24.

Items.	N.S.W. 1923-24.	Vic. 1923-24.	Q'land. 1923.	S. Aust. 1923-24.	W.A. 1923.	Tas. 1923- 24.	Australia.
Number of factories	48	29	17	4	4	..	102
Number of employees	1,243	449	332	85	52	..	2,161
Actual horse-power of engines used ..	3,601	1,633	607	198	211	..	6,250
Approx. value of land and buildings £	300,610	170,260	89,969	15,348	18,360	..	594,547
Approx. value of plant and machinery £	411,590	174,110	126,360	27,569	27,060	..	760,689
Total amount of wages paid £	238,228	95,862	63,635	16,346	8,717	..	422,788
Value of fuel used	41,558	24,809	12,198	2,719	3,161	..	84,445
Value of raw material worked up £	3,742,710	1,616,588	2,366,104	226,212	207,311	..	8,158,925
Value of final output	4,209,543	1,880,967	2,386,633	264,743	235,524	..	8,977,412
Value added in process of manufacture £	425,277	239,570	8,331	35,812	25,052	..	734,042

(ii) *Development in Australia, 1919-20 to 1923-24.* The following return furnishes particulars of fellmongering and wool-scouring establishments in Australia for the last five years :—

FELLMONGERING AND WOOL-SCOURING WORKS.—AUSTRALIA, 1919-20 TO 1923-24.

Items.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
Number of factories	110	97	97	99	102
Number of employees	3,610	2,707	2,571	2,576	2,161
Actual horse-power of engines used ..	6,025	6,278	6,657	6,530	6,250
Approx. value of land and buildings £	514,499	548,084	541,561	542,373	594,547
Approx. value of plant and machinery £	663,227	681,366	720,972	733,919	766,689
Total amount of wages paid	£ 652,842	510,286	533,705	546,015	422,788
Value of fuel used	£ 99,981	84,833	99,741	108,019	84,445
Value of raw materials worked up ..	£ 12,279,185	6,682,138	5,660,278	6,848,785	8,158,925
Value of final output	£ 14,745,652	7,913,477	6,699,452	8,602,162	8,977,412
Value added in process of manufacture £	2,366,536	1,146,506	939,433	1,645,358	734,042

The wool-scouring industry developed considerably under the régime of the Central Wool Committee, and during 1919-20 the record output of 107,726,653 lbs. of scoured wool was produced. The production fell to 63,393,044 lbs. in 1920-21, but increases were recorded during the next two years, and the output of scoured wool in 1922-23 was 71,442,322 lbs. In 1923-24 the production declined to 50,590,955 lbs.

4. Soap and Candle Factories.—(i) *Details for each State, 1923-24.* In Class II., soap and candle factories are the most important establishments. The manufacture of these two products is frequently carried on in the same factory, so that separate returns cannot be obtained; it may, however, be noted that the manufacture of soap is the more important. The following table gives particulars of soap and candle factories in each State during the year 1923-24 :—

SOAP AND CANDLE FACTORIES, 1923-24.

Items.	N.S.W. 1923-24.	Victoria. 1923-24.	Q'land. 1923.	S. Aust. 1923-24.	W. A. 1923. (c)	Tas. 1923- 24.	Australia.
Number of factories	30	17	11	5	5	2	70
Number of employees	1,229	741	161	228	135	62	2,556
Actual horse-power of engines employed	1,239	667	191	379	126	20	2,622
Approx. value of land and buildings £	371,725	149,650	48,583	47,712	a	a	650,163b
Approx. value of plant and machinery £	411,576	210,270	57,373	113,333	a	a	834,678b
Total amount of wages paid during year £	198,634	147,124	28,207	41,129	a	a	438,748b
Value of fuel used	30,556	31,635	2,155	6,487	a	a	77,976b
Value of raw material worked up £	766,906	568,001	111,128	181,716	a	a	1,729,946b
Total value of output	1,338,632	937,148	204,758	281,544	a	a	2,915,030b
Value added in process of manufacture £	541,170	337,512	91,475	93,341	a	a	1,107,108b

(a) Particulars not available for publication.

(b) Including Western Australia and Tasmania.

(c) Includes two oil establishments.

(ii) *Development in Australia, 1919-20 to 1923-24.* The following table gives similar particulars for the last five years as regards Australia as a whole :—

SOAP AND CANDLE FACTORIES.—AUSTRALIA, 1919-20 TO 1923-24.

Items.	1919-20.a	1920-21.a b	1921-22.b	1922-23.b	1923-24.b
Number of factories	61	62	69	69	70
Number of employees	2,163	2,008	2,329	2,419	2,556
Actual horse-power of engines used ..	1,749	1,782	2,015	2,320	2,622
Approx. value of land and buildings £	428,824	426,339	479,872	563,216	650,163
Approx. value of plant and machinery £	486,187	537,534	610,418	759,192	834,678
Total amount of wages paid	206,352	326,449	394,567	415,681	438,748
Value of fuel used	81,938	88,728	94,204	75,728	77,976
Value of raw material worked up	2,389,706	2,119,957	1,755,252	1,790,540	1,729,946
Value of final output	3,377,783	2,941,833	3,007,286	3,042,506	2,915,030
Value added in process of manufacture £	906,139	733,148	1,157,830	1,176,238	1,107,108

(a) Excluding three soap and candle establishments in Western Australia.

(b) Including other small establishments in Western Australia.

(iii) *Raw Materials Used and Production, 1919-20 to 1923-24.* The following statement shows the quantities of certain raw materials used, together with the production, in soap and candle factories in Australia during the years 1919-20 to 1923-24 :—

SOAP AND CANDLE FACTORIES.—RAW MATERIALS USED AND PRODUCTION, AUSTRALIA, 1919-20 TO 1923-24.

Particulars.	1919-20.a	1920-21.a	1921-22.a	1922-23.a	1923-24.a
Tallow used cwt.	390,267	353,001	460,164	482,422	434,622
Alkali used "	123,101	120,882	134,994	144,092	140,923
Coconut oil used gal.	469,549	459,013	591,117	662,161	739,377
Soap made cwt.	788,478	692,192	824,002	878,238	883,944
Candles made "	104,676	87,304	91,116	101,586	86,684

(a) Exclusive of Western Australia.

5. Saw-mills, etc.—(i) *Details for States, 1923-24.* The most important industry in Class IV. is that of saw-milling. As separate particulars of forest saw-mills are not available for some of the States, both forest and other saw-mills, as well as joinery, moulding, and box factories, have been combined in the following table :—

SAW-MILLS, FOREST AND OTHER ; JOINERY, ETC., 1923-24.

Items.	N.S.W. 1923-24.	Victoria. 1923-24.	Q'land. 1923.	S. Aust. 1923-24.	W. Aust. 1923.	Tas. 1923-24.	Australia.
Number of factories ..	847	645	313	128	167	215	2,315
Number of employees ..	9,297	9,912	5,321	1,947	5,125	2,490	34,092
Actual horse-power of engines employed ..	21,553	17,099	10,309	3,227	8,832	3,560	64,580
Approximate value of land and buildings ..	£ 1,597,728	£ 816,215	£ 381,436	£ 245,145	£ 532,160	£ 120,490	£ 3,693,174
Approximate value of plant and machinery ..	£ 1,403,314	£ 1,105,770	£ 698,272	£ 160,248	£ 1,284,309	£ 303,197	£ 4,955,110
Total amount of wages paid during year ..	£ 1,737,308	£ 1,959,571	£ 982,501	£ 373,587	£ 1,122,628	£ 400,879	£ 6,576,474
Value of fuel used ..	£ 54,706	£ 40,201	£ 18,789	£ 10,497	£ 12,038	£ 3,921	£ 140,152
Value of raw material worked up ..	£ 4,282,655	£ 2,459,280	£ 1,625,216	£ 1,474,605	£ 325,255	£ 177,013	£ 10,344,024
Total value of output ..	£ 7,173,409	£ 5,781,420	£ 3,235,651	£ 2,056,023	£ 1,766,460	£ 742,889	£ 20,755,852
Value added in process of manufacture ..	£ 2,836,048	£ 3,281,939	£ 1,591,646	£ 570,921	£ 1,429,167	£ 561,955	£ 10,271,676

(ii) *Development in Australia, 1919-20 to 1923-24.* The development of forest and other saw-mills, etc., since 1919-20 is shown in the following table :—

**SAW-MILLS, FOREST AND OTHER ; JOINERY, ETC.—AUSTRALIA,
1919-20 TO 1923-24.**

Items.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
Number of establishments ..	1,766	1,897	1,943	2,067	2,315
Number of employees ..	28,171	30,074	30,522	31,173	34,092
Actual horse-power of engines used ..	51,691	57,947	56,046	57,615	64,580
Approx. value of land and buildings ..	£ 2,376,011	£ 2,773,952	£ 3,036,444	£ 3,525,233	£ 3,693,174
Approx. value of plant and machinery ..	£ 3,253,706	£ 3,868,390	£ 4,271,225	£ 4,446,516	£ 4,955,110
Total amount of wages paid ..	£ 4,052,707	£ 5,248,331	£ 5,701,531	£ 5,832,137	£ 6,576,474
Value of fuel used ..	£ 91,341	£ 102,195	£ 115,049	£ 128,106	£ 140,152
Value of raw material worked up ..	£ 7,624,110	£ 9,344,674	£ 8,348,619	£ 9,104,572	£ 10,344,024
Value of final output ..	£ 14,276,983	£ 17,446,035	£ 16,832,110	£ 17,912,365	£ 20,755,852
Value added in process of manufacture ..	£ 6,561,532	£ 7,999,166	£ 8,368,442	£ 8,679,687	£ 10,271,676

The pre-war development in Australia in the building and other trades using timber received a temporary check during the war years, but the all-round increases since 1919-20 in the number of employees, in wages, value of materials used, and final output, as well as in capital invested in land and buildings and plant and machinery, show that the industries concerned have practically regained their normal rate of progression.

6. *Agricultural Implement Works.*—(i) *General.* The manufacture of agricultural implements is an important industry in Australia, and is of particular interest, owing to the fact that it was one of the first to which it was sought to apply the so-called "New Protection." The articles manufactured include stripper-harvesters, strippers, stump-jump and other ploughs, harrows, disc and other cultivators, winnowers, corn-shellers and baggers, drills, and other implements employed in agriculture. The stripper-harvester, which combines the stripper with a mechanism for winnowing and bagging grain, is an Australian invention, and is exported to many countries.

(ii) *Details for States, 1923-24.* The following table gives particulars of the agricultural implement works in each State for the year 1923-24 :—

AGRICULTURAL IMPLEMENT WORKS, 1923-24.

Items.	N.S.W. 1923-24.	Vic. 1923-24.	Q'land. 1923.	S. Aust. 1923-24.	W. Aust. 1923.	Tas. 1923-24.	Aus- tralia.
Number of factories	30	65	7	52	6	..	160
Number of employees	610	3,280	249	1,251	194	..	5,584
Actual horse-power of engines employed ..	378	2,008	214	972	235	..	3,807
Approx. value of land and buildings £	148,978	218,995	26,908	159,085	36,100	..	590,066
Approx. value of plant and machinery £	58,577	340,415	22,680	149,800	23,679	..	595,151
Total amount of wages paid during year £	112,342	706,420	45,427	221,284	40,529	..	1,126,002
Value of fuel used	£ 3,434	44,520	1,178	11,908	2,056	..	63,096
Value of raw material worked up	£ 118,915	747,463	107,423	220,091	248,782	..	1,442,679
Total value of output	£ 323,617	1,748,637	194,291	544,153	321,607	..	3,132,305
Value added in process of manufacture £	201,268	956,654	85,685	312,154	70,769	..	1,626,530

(iii) *Development in Australia, 1919-20 to 1923-24.* The Agricultural Implement industry declined considerably during the war years, but steady development has taken place since 1919-20, and substantial increases have occurred in all the items enumerated in the following table. Details for the past five years are as follows :—

AGRICULTURAL IMPLEMENT WORKS.—AUSTRALIA, 1919-20 TO 1923-24.

Items.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
Number of factories	141	141	140	154	160
Number of employees	3,116	4,299	4,696	4,674	5,584
Actual horse-power of engines used ..	2,505	2,576	3,312	3,619	3,807
Approx. value of land and buildings £	368,897	392,870	435,233	499,987	590,066
Approx. value of plant and machinery £	372,949	431,152	478,896	508,921	595,151
Total amount of wages paid	£ 465,558	794,554	987,610	941,778	1,126,002
Value of fuel used	£ 30,096	55,709	60,410	54,546	63,096
Value of raw material worked up	£ 586,048	1,064,611	1,387,571	1,190,905	1,442,679
Value of final output	£ 1,282,931	2,288,713	2,863,875	2,685,342	3,132,305
Value added in process of manufacture £	666,787	1,168,303	1,415,894	1,439,891	1,626,530

(a) Excluding three establishments in Western Australia.

7. Engineering Works, Ironworks, and Foundries.—(i) Details for States, 1923-24. The classification in these industries is not very satisfactory. Generally, engineering shops, ironworks, and foundries are included, as also are factories for making safes, patterns, meters, and springs. Railway workshops, agricultural implement factories, cyanide, smelting, pyrites, and metallurgical works, galvanized iron works, stove and oven-making works, and wire-working establishments are not included. The combination of industries is rendered necessary owing to the limited classification still adopted by some of the States.

ENGINEERING WORKS, IRONWORKS, AND FOUNDRIES, 1923-24.

Items.	N.S.W. 1923-24.	Victoria. 1923-24.	Q'land. 1923.	S. Aust. 1923-24.	W. Aust. 1923.	Tas. 1923-24.	Australia.
Number of factories	485	542	108	95	90	23	1,343
Number of employees	14,828	11,310	2,327	2,786	1,288	513	33,052
Actual horse-power of engines employed ..	31,315	13,184	2,756	2,348	2,025	423	52,051
Approximate value of land and buildings	£ 2,566,532	1,278,300	251,593	248,915	183,299	41,847	4,570,486
Approximate value of plant and machinery	£ 4,017,161	1,487,165	300,915	288,494	200,574	54,124	6,348,433
Total amount of wages paid during year	£ 3,270,885	2,365,865	460,529	526,063	234,860	91,093	6,949,295
Value of fuel used	£ 404,251	190,893	23,463	44,039	18,115	5,155	685,916
Value of raw materials worked up	£ 9,209,110	2,577,994	470,577	806,763	258,712	63,130	13,386,286
Total value of output	£ 14,153,081	6,295,232	1,333,466	1,585,927	589,303	194,430	24,151,439
Value added in process of manufacture	£ 4,539,720	3,526,345	839,426	735,125	312,476	126,145	10,079,237

In addition to engineering works which supply ordinary requirements, there is now a large number of establishments which engage in the manufacture of special classes of machinery and implements. The manufacture of mining, smelting, and textile machinery and apparatus forms an important section of this industry.

(ii) *Development in Australia, 1919-20 to 1923-24.* The development of engineering works, ironworks, and foundries in Australia since 1919-20 is shown in the following table :—

ENGINEERING WORKS, IRONWORKS, AND FOUNDRIES.—AUSTRALIA, 1919-20 TO 1923-24.

Items.	1919-20a.	1920-21a.	1921-22.	1922-23.	1923-24.
Number of factories	1,141	1,248	1,281	1,368	1,343
Number of employees	31,050	33,914	30,628	31,872	33,052
Actual horse-power of engines used ..	53,410	48,852	51,780	51,328	52,051
Approx. value of land and buildings £	3,527,933	4,108,640	4,197,014	4,560,030	4,570,486
Approx. value of plant and machinery £	6,339,285	5,702,388	5,933,667	6,201,317	6,348,433
Total amount of wages paid	5,161,441	6,523,651	6,265,599	6,078,966	6,949,295
Value of fuel used	1,037,012	631,032	623,273	560,783	685,916
Value of raw material worked up ..	11,928,660	14,247,190	11,727,407	8,794,023	13,386,286
Value of final output	20,209,329	24,361,080	21,468,595	18,260,945	24,151,439
Value added in process of manufacture £	7,243,657	9,482,858	9,117,915	8,906,139	10,079,237

(a) Including three agricultural implement establishments in Western Australia.

The expansion of local industry during recent years has necessitated an increased provision of machinery, and the difficulty of obtaining overseas supplies during the war and for some years after created an opportunity of which the Australian engineering trade has availed itself largely. Since 1919-20 the number of establishments has increased by nearly 18 per cent. and the number of employees by 7 per cent., while the capital invested in land, buildings, plant and machinery increased from £9,867,218 to £10,918,919. It is difficult to measure the output of the engineering industries owing to price fluctuations, but the closing down of the Broken Hill Proprietary Company's Steel Works at Newcastle during the major part of 1922-23 was mainly responsible for the greatly reduced output recorded for that year. These industries are all large consumers of Australian materials, and for this reason their progress is doubly important.

8. *Railway and Tramway Workshops.*—(i) *Details for each State, 1923-24.* The railway and tramway workshops which form an important item in Class V. are chiefly State-owned institutions. The following table giving details concerning them includes, however, private and municipal establishments for manufacturing and repairing rolling-stock :—

RAILWAY AND TRAMWAY WORKSHOPS, 1923-24.

Items.	N.S.W. 1923-24.	Victoria. 1923-24.	Q'land. 1923.	S. Aust. 1923-24.	W. Aust. 1923.	Tas. 1923-24.	Australia
Number of factories	45	18	11	21	20	7	122
Number of employees	11,500	5,890	2,667	2,874	1,799	400	25,130
Actual horse-power of engines employed	0,983	3,388	3,009	1,535	2,642	273	17,830
Approximate value of land and buildings £	1,888,539	806,055	288,213	404,871	498,209	1,195	3,887,082
Approximate value of plant and machinery £	2,165,043	765,795	217,261	204,291	332,858	91,927	3,867,175
Total amount of wages paid during year	2,723,773	1,300,137	612,499	680,518	386,846	95,410	5,799,183
Value of fuel used	65,983	33,377	10,846	25,781	20,628	3,036	159,651
Value of raw material worked up	1,994,316	1,596,236	374,732	321,567	278,238	31,740	4,596,829
Total value of output	5,376,580	3,222,714	960,281	1,245,872	688,853	158,006	11,652,306
Value added in process of manufacture	3,316,281	1,593,101	574,703	898,524	330,987	123,230	6,895,826

In addition to the above, a railway workshop is in operation in the Northern Territory. The work is confined almost exclusively to repairs to rolling-stock, etc., no new goods being manufactured. For the sake of convenience this establishment is not included in any of the tables in this chapter.

(ii) *Development in Australia, 1919-20 to 1923-24.* The following table shows the development of railway and tramway workshops in Australia since 1919-20 :—

RAILWAY AND TRAMWAY WORKSHOPS.—AUSTRALIA, 1919-20 TO 1923-24.

Items.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
Number of factories	94	103	101	112	122
Number of employees	21,488	23,670	23,802	23,672	25,130
Actual horse-power of engines used ..	15,626	16,142	15,889	16,603	17,830
Approx. value of land and buildings £	2,976,838	3,123,818	3,287,393	3,429,066	3,887,082
Approx. value of plant and machinery £	2,616,001	2,810,282	3,111,789	3,299,252	3,867,175
Total amount of wages paid £	3,977,702	5,273,942	5,609,957	5,591,520	5,799,183
Value of fuel used	104,496	132,956	143,357	155,795	159,651
Value of raw material worked up £	2,829,907	3,808,850	4,518,058	4,459,599	4,596,829
Value of final output	7,116,984	9,488,649	10,610,662	10,603,049	11,652,306
Value added in process of manufacture £	4,182,581	5,546,843	5,949,247	5,987,655	6,893,826

The growth of the railway and tramway systems, conjointly with heavy increases in passenger and goods traffic throughout Australia, has resulted in corresponding activity in workshops engaged in the manufacture or repair of rolling-stock, etc. During the war, the operations of these establishments were restricted to necessary work, but since 1919-20 the rate of expansion has been rapid. The number of employees has risen from 21,488 to 25,130, and the value of the output has increased by more than 60 per cent. during the past four years.

9. *Smelting Works, etc.*—The following table gives particulars of metal smelting, cyanide, pyrites, and metallurgical works. The classification of these works is not uniform in the several States, and the combination of industries is, therefore, somewhat unsatisfactory. The returns do not include particulars of plants used on mines.

SMELTING, CYANIDE, PYRITES, ETC., WORKS, 1923-24.

Items.	N.S.W. 1923-24.	Victoria. 1923-24.	Q'land. 1923.	S. Aust. 1923-24.	W.A. 1923. (a)	Tas. 1923- 24.	Australia.
Number of factories	20	8	5	2	..	3	38
Number of employees	2,697	72	601	1,677	..	733	5,780
Actual horse-power of engines employed ..	22,779	93	3,912	8,441	..	34,908	70,133
Approx. value of land and buildings £	479,177	14,975	21,388	b	..	b	c 938,100
Approx. value of plant and machinery £	2,764,298	13,230	450,210	b	..	b	c 5,051,231
Total amount of wages paid during year £	760,280	13,630	155,882	b	..	b	c 1,586,264
Value of fuel used	1,380,100	3,029	104,165	b	..	b	c 1,874,923
Value of raw material worked up £	5,579,104	102,184	300,223	b	..	b	c 10,696,525
Total value of output	9,541,838	135,661	898,313	b	..	b	c 17,384,293
Value added in process of manufacture £	2,582,634	30,448	493,925	b	..	b	c 4,812,845

(a) See third paragraph below.

(b) Information not available for publication.

(c) Including South Australia and Tasmania.

In New South Wales the figures quoted represent twenty smelting works; those for Victoria include two cyanide, four metallurgical and two smelting works; Queensland smelting and cyaniding works; South Australia two smelting works; and Tasmania three smelting works.

The position of the base metals, with the exception of copper and tin, has shown considerable improvement since 1919–20, when the industry suffered a serious depression owing to the fall in metal prices. The equipment of these metal establishments has been greatly developed since 1919–20, the value of the plant and machinery used therein increasing from £1,618,781 to £5,051,231, while the actual horse-power of the engines used has more than doubled.

In Western Australia all the plants are worked on the mines, and are therefore not included.

10. Bacon-curing Factories.—(i) *Details for each State, 1923–24.* The following table gives particulars of factories engaged in bacon-curing in each State during the past year :—

BACON-CURING FACTORIES, 1923–24.

Items.	N.S.W. 1923–24.	Victoria. 1923–24.	Q'land. 1923.	S. Aust. 1923–24.	W. Aust. 1923.	Tas. 1923–24.	Aus- tralia.
Number of factories	22	24	6	10	6	5	73
Number of employees	325	534	421	151	55	37	1,523
Actual horse-power of engines employed	680	1,647	684	253	208	108	3,580
Approximate value of land and buildings £	128,589	198,355	111,507	23,719	26,971	9,714	498,855
Approximate value of plant and machinery £	75,564	123,725	60,782	24,222	15,507	3,482	303,282
Total amount of salaries and wages paid £	83,632	118,751	97,817	30,979	12,879	5,118	349,176
Value of fuel used £	13,989	17,549	11,238	3,523	2,612	603	49,514
Value of raw material worked up .. £	888,565	1,313,895	726,624	287,601	127,037	83,765	3,427,487
Total value of output £	1,078,719	1,602,615	1,120,070	355,280	150,636	92,109	4,399,429
Value added in process of manu- facture £	176,165	271,171	382,208	64,156	20,987	7,741	922,428

(ii) *Quantity and Value of Production.* The following table shows the number of pigs killed and the quantity and value of the production of bacon-curing factories in each State for the year 1923–24 :—

BACON-CURING FACTORIES.—PIGS KILLED, AND PRODUCTION, 1923–24.

Particulars.	N.S.W. 1923–24.	Victoria. 1923–24.	Q'land. 1923.	S. Aust. 1923–24.	W. Aust. 1923.	Tasmania. 1923–24.	Aus- tralia.
PIGS KILLED.							
Number	176,266	217,847	192,209	53,395	(a)18,030	15,327	673,074
PRODUCTS (,000 OMITTED).							
Bacon and ham .. lbs.	17,694	20,458	15,814	4,432	2,170	1,489	62,057
Lard	601	965	833	165	103	86	2,753
VALUE.							
Bacon and ham .. £	913,689	1,521,331	783,097	269,779	127,770	81,685	3,697,351
Lard £	21,304	34,208	35,904	8,172	2,897	4,143	106,628
Other products .. £	87,867	47,076	301,069	77,329	8,342	6,281	527,964

(a) In Western Australia, a portion of the bacon and ham treated in factories is imported and subsequently smoked in that State.

Bacon and ham and other pig products are dealt with more fully in Chapter XVIII., *Farmyard, Dairy, and Bee Products.*

11. Butter, Cheese, and Condensed Milk Factories.—(i) *Details for each State, 1923-24.* The subjoined table gives particulars of butter, cheese and condensed milk factories in each State during the year 1923-24 :—

BUTTER, CHEESE, AND CONDENSED MILK FACTORIES, 1923-24.

Items.	N.S.W. 1923-24.	Victoria. 1923-24.	Q'land. 1923.	S. Aust. 1923-24.	W.A. 1923.	Tas. 1923-24.	Australia.
Number of factories	171	184	127	59	9	33	583
Number of employees	1,320	2,280	1,089	337	53	154	5,233
Actual horse-power of engines employed	4,981	5,137	3,115	933	356	314	14,836
Approximate value of land and buildings £	458,740	814,880	273,409	166,779	23,260	33,089	1,770,157
Approximate value of plant and machinery £	609,900	908,360	453,894	133,588	19,615	30,325	2,155,682
Total amount of wages paid £	307,304	515,996	196,018	61,694	10,110	21,303	1,112,425
Value of fuel used £	76,083	125,330	34,866	9,300	1,923	2,486	249,988
Value of raw material worked up £	5,374,813	6,799,796	2,963,741	1,000,180	109,408	274,915	16,542,862
Total value of output £	6,062,990	7,974,676	3,815,456	1,191,143	137,081	344,773	19,526,119
Value added in process of manufacture £	612,094	1,049,550	796,849	181,654	25,750	67,372	2,733,269

(ii) *Development in Australia, 1919-20 to 1923-24.* The following table shows the progress of the factories in this industry during the past five years :—

**BUTTER, CHEESE, AND CONDENSED MILK FACTORIES.—AUSTRALIA,
1919-20 TO 1923-24.**

Items.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
Number of factories	563	579	591	573	583
Number of employees	4,544	4,981	5,368	5,141	5,233
Actual horse-power of engines used	10,102	11,920	11,947	13,149	14,836
Approx. value of land and buildings £	1,060,544	1,229,964	1,335,760	1,490,729	1,770,157
Approx. value of plant and machinery £	1,262,706	1,491,974	1,711,169	2,184,761	2,155,682
Total amount of wages paid £	742,341	944,783	1,109,860	1,091,218	1,112,425
Value of fuel used £	167,142	225,356	268,585	244,144	249,988
Value of raw material worked up £	13,737,678	22,096,843	18,062,449	17,464,258	16,542,862
Value of final output £	15,989,419	25,400,335	22,003,615	20,746,782	19,526,119
Value added in process of manufacture £	2,084,590	3,078,136	3,677,581	3,038,380	2,733,269

(iii) *Quantity and Value of Production.* The following table shows the quantity and value of butter, cheese, and condensed milk produced, and the quantity of milk used in butter, cheese, and condensed milk factories in each State during the past year :—

BUTTER, CHEESE, AND CONDENSED MILK FACTORIES.—PRODUCTION, 1923-24.

Particulars.	N.S.W. 1923-24.	Victoria. 1923-24.	Q'land. 1923.	S. Aust. 1923-24.	W. Aust. 1923.	Tasmania. 1923-24.	Australia.
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MILK USED (,000 OMITTED).

Butter factories .. gals.	152,105	184,897	78,488	26,384	3,741	9,574	455,189
Cheese	6,177	6,637	7,233	3,490	..	940	24,477
Condensed milk factories ..	3,059	11,649	2,181	..	..	..	16,889

PRODUCTS (,000 OMITTED).

Butter lbs.	68,030	81,292	38,418	13,312	1,716	4,264	207,032
Cheese	5,835	6,796	7,210	3,679	..	944	24,464
Condensed and concentrated milk lbs.	4,368	37,870	8,132	..	..	..	50,370
Powdered milk	2,790	11,230	..	..	..	..	14,020

**BUTTER, CHEESE, AND CONDENSED MILK FACTORIES.—PRODUCTION,
1923-24—continued.**

Particulars.	N.S.W. 1923-24.	Victoria. 1923-24.	Q'land. 1923.	S. Aust. 1923-24.	W. Aust. 1923.	Tasmania. 1923-24.	Aus- tralia.
VALUE (,000 OMITTED).							
Butter	£ 5,348	6,074	3,188	1,024	142	308	16,084
Cheese	£ 265	239	343	144	..	36	1,027
Condensed and con- centrated milk ..	£ 137	1,025	272	..	..	..	1,434
Powdered Milk ..	£ 152	378	..	..	..	..	530

The butter, cheese, and condensed milk industries are dealt with more fully in the Chapter entitled *Farmyard, Dairy, and Bee Products*.

12. Meat and Fish Preserving, Ice and Refrigerating Works.—These industries are now of considerable importance in Australia. Large freezing works have been installed at many ports throughout the continent for the purpose of freezing produce chiefly for export, while insulated space for the carriage of frozen produce is provided by a number of steamship companies trading between Australia and other parts of the world.

The details given in the subjoined table include ice-making and freezing works, also meat-canning factories, separate particulars for each item for all the States not being available.

MEAT AND FISH PRESERVING, ICE AND REFRIGERATING WORKS, 1923-24.

Items.	N.S.W. 1923-24.	Victoria. 1923-24.	Q'land. 1923.	S. Aust. 1923-24.	W. Aust. 1923.	Tas. 1923-24.	Aus- tralia.
Number of factories	170	51	67	17	31	13	349
Number of employees ..	1,428	1,153	3,034	194	336	65	6,210
Actual horse-power of engines employed	11,384	9,401	11,711	1,853	3,168	305	37,822
Approximate value of land and buildings	£ 1,238,561	1,042,960	1,560,051	187,257	499,260	59,500	4,587,589
Approximate value of plant and machinery	£ 1,191,161	712,385	934,551	127,447	377,119	26,694	3,369,357
Total amount of wages paid dur- ing year	£ 302,057	214,737	561,717	42,757	81,572	10,753	1,213,593
Value of fuel used	£ 113,010	51,389	87,124	17,203	25,651	2,220	296,597
Value of raw material worked up ..	£ 4,458,073	878,416	1,139,563	71,265	174,860	4,562	6,726,739
Total value of output	£ 5,317,112	1,306,385	2,388,699	148,775	285,762	45,759	9,492,492
Value added in process of manu- facture	£ 746,029	376,580	1,162,012	60,307	85,251	38,977	2,469,156

Exclusive of Victoria, for which State particulars are not available, the returns show that 212,246 tons of ice, valued at £469,550, were manufactured in Australia in 1923-24.

Full particulars regarding quantities and values of beef, mutton, and lamb preserved by cold process, exported from Australia during a series of years, will be found in Chapter XVI.

13. Biscuit Factories.—The following table gives particulars regarding establishments at which the manufacture of biscuits, cakes, etc., was carried on in each State during the year 1923-24 :—

BISCUIT, ETC., FACTORIES, 1923-24.

Items.	N.S.W. 1923-24.	Victoria. 1923-24.	Q'land. 1923.	S. Aust. 1923-24.	W. Aust. 1923.	Tas. 1923-24.	Aus- tralia.
Number of factories ..	36	9	21	4	18	3	91
Number of employees ..	2,803	1,476	618	184	333	157	5,571
Actual horse-power of engines employed ..	1,288	540	338	140	159	75	2,540
Approximate value of land and buildings ..	£ 399,992	111,035	96,190	39,603	38,153	30,800	715,863
Approximate value of plant and machinery ..	£ 214,102	115,770	57,269	24,976	23,967	10,720	446,804
Total amount of wages paid during year ..	£ 409,264	213,307	109,038	21,756	44,450	18,469	816,284
Value of fuel used ..	£ 27,236	24,062	5,608	3,126	5,249	2,385	67,666
Value of raw material worked up ..	£ 1,602,138	658,638	194,417	63,862	142,591	35,096	2,696,742
Total value of output ..	£ 2,795,941	1,135,114	465,234	108,798	223,115	78,996	4,807,198
Value added in process of manufacture ..	£ 1,166,567	452,414	265,209	41,810	75,275	41,515	2,042,790

14. Jam and Fruit Preserving, Pickles, Sauces, and Vinegar Factories.—(i) *Details for each State, 1923-24.* The subjoined table gives particulars of factories at which these industries were carried on in each State during the year 1923-24. Separate returns for the different branches of the industry are not available for most of the States.

JAM AND FRUIT PRESERVING, PICKLES, ETC., FACTORIES, 1923-24.

Items.	N.S.W. 1923-24.	Victoria. 1923-24.	Q'land. 1923.	S. Aust. 1923-24.	W. Aust. 1923.	Tas. 1923-24.	Aus- tralia.
Number of factories ..	47	47	19	20	14	28	175
Number of employees ..	2,045	2,573	407	638	103	834	6,600
Actual horse-power of engines employed ..	764	1,036	371	269	90	1,411	3,941
Approximate value of land and buildings ..	£ 381,701	275,815	56,450	103,299	20,181	143,908	981,354
Approximate value of plant and machinery ..	£ 186,291	199,370	57,828	76,465	11,553	68,350	599,857
Total amount of wages paid during year ..	£ 228,679	397,750	53,137	88,592	9,323	107,623	885,104
Value of fuel used ..	£ 17,756	25,992	2,726	7,175	935	8,822	63,406
Value of raw material worked up ..	£ 940,100	1,105,650	153,100	301,351	54,352	384,634	2,939,187
Total value of output ..	£ 1,400,309	1,930,258	280,232	484,306	72,486	554,792	4,722,333
Value added in process of manufacture ..	£ 442,453	798,616	124,406	175,780	17,199	161,336	1,719,790

(ii) *Development in Australia, 1919-20 to 1923-24.* The following table refers to jam and fruit preserving, etc., establishments in Australia for the last five years :—

JAM AND FRUIT PRESERVING, PICKLES, ETC., FACTORIES.—AUSTRALIA, 1919-20 TO 1923-24.

Items.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
Number of factories ..	152	154	164	170	175
Number of employees ..	6,974	6,243	5,958	5,983	6,600
Actual horse-power of engines employed ..	2,526	2,996	3,257	3,698	3,941
Approx. value of land and buildings ..	£ 576,302	760,855	830,484	895,513	981,354
Approx. value of plant and machinery ..	£ 348,549	516,348	556,801	606,716	599,857
Total amount of wages paid ..	£ 731,473	749,980	685,017	781,429	885,104
Value of fuel used ..	£ 57,848	58,737	48,987	56,718	63,406
Value of raw material worked-up ..	£ 3,757,611	3,465,562	2,541,268	2,704,356	2,939,187
Total value of output ..	£ 5,487,960	5,262,608	3,975,779	4,549,216	4,722,333
Value added in process of manufacture ..	£ 1,672,501	1,738,309	1,385,524	1,788,142	1,719,790

The progress of the jam industry was very marked during the war years, when an important export trade was built up. During the past four years, however, the exports have declined to insignificant proportions, and the production of jams and jellies fell from 111,322,754 lbs. in 1919-20 to 66,283,840 lbs. in 1923-24. The output of preserved fruit, pickles, and sauce has, however, increased during the same period.

(iii) *Production.* The following table shows the quantity and value of jams, pickles, and sauces manufactured in each State during 1923-24 :—

JAMS, PRESERVED FRUIT, PICKLES AND SAUCES.—OUTPUT, 1923-24.

Particulars.	N.S.W. 1923-24.	Victoria. 1923-24.	Q'land. 1923.	S. Aust. 1923-24.	W. Aust. 1923.	Tasmania. 1923-24.	Aus- tralia.
QUANTITY (,000 OMITTED).							
Jams lbs.	21,227	22,159	4,339	8,922	413	9,224	66,284
Pulp "	1,598	23,373	914	5,026	..	10,198	41,109
Fruit, preserved "	10,520	26,777	5,863	3,951	..	2,867	49,978
Pickles pints	2,649	2,361	400	215	156	9	5,790
Sauces "	6,299	10,696	641	3,226	213	18	21,093
VALUE.							
Jams £	567,830	592,753	118,379	218,218	11,491	269,522	1,778,193
Pulp £	9,066	132,629	4,318	30,088	..	147,680	323,781
Fruit, preserved £	241,911	610,626	99,924	77,867	..	93,838	1,124,166
Pickles £	105,616	94,157	15,948	9,565	5,142	450	230,878
Sauces £	241,286	409,705	21,247	120,404	6,554	900	800,096

15. *Confectionery Factories.*—(i) *Details for each State, 1923-24.* The growth of this industry will be apparent when it is stated that at the close of 1900 there were in New South Wales only 16 establishments, with 706 employees, and in Victoria 16 establishments, employing 731 persons, the plant and machinery in the former State being valued at £2,815, and in the latter at £19,070. Returns for 1923-24 are given hereunder :—

CONFECTIONERY FACTORIES, 1923-24.

Items.	N.S.W. 1923-24.	Victoria. 1923-24.	Q'land. 1923.	S. Aust. 1923-24.	W. Aust. 1923.	Tas. 1923-24.	Aus- tralia.
Number of factories	92	113	11	20	15	7	258
Number of employees	2,931	3,839	639	478	335	502	8,724
Actual horse-power of engines employed	3,517	6,046	243	530	368	964	11,668
Approximate value of land and buildings £	904,934	a	70,451	75,115	54,713	a	61,773,340
Approximate value of plant and machinery £	834,905	a	34,962	75,306	55,068	a	61,951,422
Total amount of wages paid during year £	391,316	a	75,487	54,592	36,983	a	61,262,099
Value of fuel used £	37,324	a	2,817	7,091	4,103	a	6,126,547
Value of raw material worked up £	1,144,703	a	106,482	176,776	112,973	a	63,318,628
Total value of output £	2,286,475	a	304,083	292,930	164,558	a	66,162,631
Value added in process of manufacture £	1,104,448	a	194,789	109,063	47,482	a	62,717,656

(a) Not available for publication.

(b) Including particulars of States marked (a).

(ii) *Development in Australia, 1919-20 to 1923-24.* The growth of the confectionery industry during the past four years is exhibited in the following table :—

CONFECTIONERY FACTORIES.—AUSTRALIA, 1919-20 TO 1923-24.

Items.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
Number of factories	181	200	223	258	258
Number of employees	7,323	7,137	7,399	7,945	8,724
Actual horse-power of engines employed	4,067	4,862	5,313	6,434	11,668
Approx. value of land and buildings £	878,305	1,041,380	1,185,539	1,593,346	1,773,340
Approx. value of plant and machinery £	664,452	1,278,882	1,419,984	1,746,738	1,951,422
Total amount of wages paid during year £	755,238	937,536	1,046,797	1,159,980	1,262,099
Value of fuel used £	75,084	98,975	105,479	114,947	126,547
Value of raw material worked up £	2,897,859	3,421,474	3,220,680	3,336,340	3,318,428
Total value of output £	4,559,437	5,419,985	5,597,920	5,941,691	6,162,631
Value added in process of manufacture £	1,586,494	1,904,536	2,271,761	2,400,395	2,717,656

The confectionery industry has expanded considerably during recent years, largely as a result of the stimulus afforded by the embargo placed on the importation of luxuries during the period of the war. The establishments engaged therein found employment for 8,724 persons in 1923-24, and the value of the output amounted to £6,162,631, or more than 35 per cent. greater than the value of the production in 1919-20. The Australian market has been captured, and a small export trade built up.

16. Flour Mills.—(i) *Details for States, 1923-24.* The following table shows the position of the flour-milling industry in each State in 1923-24 :—

FLOUR MILLS, 1923-24.

Items.	N.S.W. 1923-24.	Victoria. 1923-24.	Q'land. 1923. a	S. Aust. 1923-24. a	W. Aust. 1923. a	Tas. 1923-24.	Australia.
Number of factories ..	60	47	12	37	18	8	182
Number of employees ..	1,211	1,114	288	584	395	105	3,697
Actual horse-power of engines employed ..	6,563	5,647	1,363	3,164	2,853	418	20,008
Approximate value of land and buildings ..	£ 615,158	297,415	124,843	173,484	165,549	37,200	1,413,649
Approximate value of plant and machinery ..	£ 788,224	440,570	148,802	265,730	175,088	27,305	1,845,719
Total amount of wages paid during year ..	£ 294,143	266,540	65,901	113,085	80,386	24,943	844,998
Value of fuel used ..	£ 69,472	58,015	8,988	29,017	17,966	2,775	186,233
Value of raw material worked up ..	£ 4,977,707	4,483,925	725,103	1,295,903	1,255,641	446,566	13,184,845
Total value of output ..	£ 5,786,939	5,495,110	974,021	1,583,324	1,537,956	489,498	15,866,848
Value added in process of manufacture ..	£ 739,760	953,170	239,930	258,404	264,349	40,157	2,495,770

(a) The manufacture of cornflour, oatmeal, etc., was also carried on in some of these establishments.

(ii) *Production of Flour and By-products, 1919-20 to 1923-24.* The production of flour by the mills in each State for the years 1919-20 to 1923-24 was as follows :—

FLOUR MILLS.—PRODUCTION OF FLOUR, 1919-20 TO 1923-24.

Year (b).	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
	Tons.a	Tons.a	Tons.a	Tons.a	Tons.a	Tons.a	Tons.a
1919-20 ..	348,691	353,683	49,300	134,727	141,516	22,311	1,050,228
1920-21 ..	244,818	260,032	54,383	98,557	120,125	23,696	801,511
1921-22 ..	336,572	308,532	54,694	108,893	82,148	20,613	911,452
1922-23 ..	354,704	352,002	51,476	109,761	94,316	23,220	985,479
1923-24 ..	409,645	382,204	54,244	113,436	107,990	25,337	1,092,856

(a) Tons of 2,000 lbs. (b) See general note on first page of this Chapter.

The total production of flour in Australia for the last year, viz., 1,092,856 tons, was valued at £12,110,332. In addition, 461,523 tons of bran and pollard, valued at £3,351,575, were made. The total quantity of wheat ground was 52,586,662 bushels.

17. Sugar Mills.—(i) *Details for 1923-24.* The following table shows the position of the cane-crushing branch of the sugar-making industry in Queensland and New South Wales in 1923-24. Sugar-cane is not grown in the other States. Details regarding the area, yield, etc., of sugar-cane will be found in Chapter XVII., "Agricultural Production."

SUGAR MILLS, 1923-24.

Items.	N.S.W. 1923-24.	Queensland. 1923.	Australia.
Number of factories	3	37	40
Number of employees	445	5,555	6,000
Actual horse-power of engines employed	1,926	30,443	32,369
Approximate value of land and buildings	£ 111,869	720,261	832,130
Approximate value of plant and machinery	£ 447,479	3,988,265	4,435,744
Total amount of wages paid during year	£ 71,141	1,004,196	1,075,337
Value of fuel used	£ 11,122	132,860	143,982
Value of raw material worked up	£ 298,565	5,010,687	5,309,252
Total value of output	£ 454,420	7,299,474	7,753,894
Value added in course of manufacture	£ 144,733	2,155,927	2,300,660

The products of the sugar mill are raw sugar and molasses, the former being sent to the refineries in different parts of Australia for further treatment. Part of the molasses produced is used for distillation, part is prepared for human consumption, part is turned into food-cake for cattle, and part is used for manuring land, but a considerable quantity is allowed to run to waste.

(ii) *Progress of Industry.* (a) *New South Wales.* The following table shows the progress of this industry in New South Wales since 1919-20 :—

SUGAR MILLS.—NEW SOUTH WALES, 1919-20 TO 1923-24.

Items.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
Number of factories ..	3	3	3	3	3
Number of employees ..	419	437	428	446	445
Cane crushed .. tons	91,321	131,313	149,474	147,992	132,084
Sugar produced .. tons	10,837	15,124	17,806	18,580	16,829
Molasses produced .. gals.	494,600	649,800	940,700	816,720	752,650

The number of New South Wales mills has been reduced to three during recent years owing chiefly to the tendency towards concentration of cane-crushing in mills fitted with modern machinery, and the consequent closing of the small home mill. On the north coast of New South Wales some land formerly devoted to sugar-cane has been turned into pasture in connexion with the dairying industry, but a revival in cane-growing in this district has led to a movement for the erection of additional mills to treat the increased production.

(b) *Queensland.* Details for Queensland from 1911 onwards are given hereunder.

SUGAR MILLS.—QUEENSLAND, 1911 TO 1923.

Items.	1911.	1920.	1921.	1922.	1923.
Number of factories ..	49	34	43	38	37
Number of employees ..	4,295	4,851	6,091	5,589	5,555
Cane crushed .. tons	1,534,451	1,339,455	2,287,416	2,167,990	2,045,808
Sugar produced .. tons	173,296	167,401	282,198	287,785	269,175
Molasses—					
Sold to distillers and others .. gals.	2,393,669	985,951	2,738,795	1,774,224	2,657,252
Used as fodder .. gals.	789,564	1,381,041	2,053,338	1,916,393	2,448,595
Used as manure .. gals.	223,000	24,000	78,720	322,113	209,600
Run to waste or burnt a .. gals.	1,847,333	3,050,901	4,866,272	5,503,099	4,883,071
In Stock .. gals.	1,197,626	733,974	997,274	803,050	866,460
Total Molasses a .. gals.	6,451,192	6,175,867	10,734,399	10,318,879	11,064,978

(a) Quantity recorded; large quantities run to waste of which no record is kept.

18. **Sugar Refineries.**—The establishment of the sugar-refining industry considerably antedates the establishment of the sugar-milling industry, the raw material operated upon being originally brought chiefly from Mauritius and the East. In 1923–24 there were two sugar refineries in each of the States of Victoria and Queensland, and one in each of the States of New South Wales and South Australia. The returns for the individual States cannot be disclosed.

In the six refineries, an average number of 1,622 hands was employed during the year. The approximate value of land and buildings was £702,548, of plant and machinery, £1,367,859; and the total amount of wages paid during the year was £368,005. The value of all materials used in sugar refineries was £9,405,998, while the total output reached £11,034,304. The amount of crude sugar used was 304,217 tons, and of refined sugar produced 296,033 tons, valued at £10,869,676.

19. **Breweries.**—(i) *Details for each State, 1923–24.* The following table gives particulars concerning breweries in each State :—

BREWERIES, 1923–24.

Items.	N.S.W. 1923–24.	Vic. 1923–24.	Q'land. 1923.	S. Aust. 1923–24.	W. Aust. 1923.(a)	Tas. 1923–24.	Australia.
Number of breweries	15	14	9	7	10	2	57
Number of employees	1,225	1,186	523	381	438	101	3,854
Actual horse-power of engines employed	3,479	5,058	1,629	1,077	1,248	270	12,761
Approximate value of land and buildings £	760,295	459,800	191,867	105,103	205,877	55,500	1,778,442
Approximate value of plant and machinery £	1,009,851	661,475	206,093	149,503	171,124	49,765	2,247,811
Total amount of wages paid during year £	357,683	323,806	127,427	106,768	122,502	25,064	1,063,250
Value of fuel used £	77,911	61,211	16,718	18,427	17,815	5,514	197,596
Value of raw material worked up £	1,147,228	961,038	178,651	226,082	233,221	41,671	2,787,891
Total value of output £	2,623,714	2,412,387	618,009	500,855	538,223	194,274	6,887,462
Value added in process of manufacture £	1,398,575	1,390,138	422,640	256,346	287,187	147,089	3,901,975

(a) Includes malting.

(ii) *Development in Australia, 1919–20 to 1923–24.* The following table shows the progress of this industry during the past four years :—

BREWERIES.—AUSTRALIA, 1919–20 TO 1923–24.

Items.	1919–20.	1920–21.	1921–22.	1922–23.	1923–24.
Number of breweries	68	67	64	61	57
Number of employees	3,710	3,752	3,814	3,774	3,854
Actual horse-power of engines used	18,091	10,833	12,132	11,492	12,761
Approx. value of land and buildings £	1,109,813	1,619,027	1,676,471	1,710,321	1,778,442
Approx. value of plant and machinery £	1,243,272	1,882,956	1,993,699	2,140,654	2,247,811
Total amount of wages paid £	831,779	937,563	1,032,430	1,027,689	1,063,250
Value of fuel used £	160,609	195,135	214,803	194,324	197,596
Value of raw material worked up £	2,760,601	3,341,707	3,087,460	2,913,409	2,787,891
Value of final output £	6,631,409	6,991,770	6,798,223	6,872,682	6,887,462
Value added in process of manufacture £	3,710,199	3,454,928	3,495,960	3,764,949	3,901,975

The main feature in the history of the brewing industry, which was established at an early date in Australia, has been the change from the small local brewery in every township of moderate size to the large centralized city brewery. This, however, has not been so much in evidence during the period embraced in the above table, the reduction of the number of establishments during recent years being mainly due to amalgamations. The total value of output of breweries in Australia increased from £6,631,409 in 1919–20 to £6,887,462 in 1923–24, but the increase was wholly due to higher

prices, for the quantity of ale and stout brewed decreased during the period, the respective totals for the years 1919-20 and 1923-24 being 71,630,608 and 66,641,251 gallons. The consumption of ale and stout per head of the population declined slightly in Australia during the past four years, and for 1923-24 the quantity consumed amounted to about 11 gallons.

(iii) *Materials Used and Production.* The table below shows the quantity of raw materials used and the quantity and value of ale and stout brewed in each State during the year 1923-24.

BREWERIES.—MATERIALS USED AND PRODUCTION, 1923-24.

Particulars.	N.S.W. 1923-24.	Victoria. 1923-24.	Q'land. 1923.	S. Aust. 1923-24.	W. Aust. 1923.	Tasmania. 1923-24.	Australia.
RAW MATERIALS USED.							
Malt .. bushels	835,052	743,131	211,136	164,994	156,900	56,768	2,167,981
Hops .. lb.	804,377	796,769	228,152	188,682	157,546	78,868	2,254,394
Sugar .. cwt.	99,853	112,840	28,711	25,244	23,567	5,835	296,050

RAW MATERIALS USED PER 1,000 GALLONS OF ALE AND STOUT PRODUCED.

Malt .. bushels	34.22	31.08	30.85	32.00	32.07	39.41	32.53
Hops .. lb.	32.96	33.33	33.34	36.59	32.20	54.75	33.83
Sugar .. cwt.	4.09	4.72	4.20	4.89	4.82	4.05	4.44

ALE AND STOUT BREWED.

Quantity	gallons	24,401,301	23,907,100	6,843,125	5,156,321	4,892,900	1,440,504	66,641,251
Value(a)	£	2,587,357	2,412,387	618,009	498,463	519,602	194,114	6,829,932

(a) Exclusive of excise duty.

20. *Distilleries.*—The subjoined table gives particulars of distilleries in four States. There are no distilleries in Western Australia or Tasmania.

DISTILLERIES, 1923-24.

Items.	N.S.W. 1923-24.	Vic. 1923-24.	Q'land. 1923.	S. Aust. 1923-24.	Australia.
Number of distilleries	3	10	4	26	43
Number of employees	29	129	72	146	376
Actual horse-power of engines employed ..	168	316	216	513	1,213
Approx. value of land and buildings ..	£ 18,640	171,090	43,158	131,796	364,684
Approx. value of plant and machinery ..	£ 64,484	109,430	94,706	106,420	375,040
Total amount of wages paid during year ..	£ 8,861	26,632	17,382	27,356	80,231
Value of fuel used	£ 5,056	10,560	6,422	13,271	35,309
Value of raw materials worked up	£ 74,555	80,292	24,658	153,864	333,369
Total value of output	£ 103,879	173,557	85,747	233,461	596,644
Value added in process of manufacture ..	£ 24,268	82,705	54,667	66,326	227,966

The total quantity of spirit distilled during the year was 4,676,956 proof gallons, while the materials used comprised 664,266 cwt. of molasses, 123,254 bushels of malt, and 6,660,421 gallons of wine.

21. *Tobacco, etc., Factories.*—(i) *Details for each State, 1923-24.* During the year 1923-24 there were twenty-eight establishments in which the manufacture of tobacco, cigars, and cigarettes was carried on. There were no factories engaged in this industry in Queensland or Tasmania.

TOBACCO, CIGAR, AND CIGARETTE FACTORIES, 1923-24.

Items.	N.S.W. 1923-24.	Vic. 1923-24.	Q'land. 1923.	S.A. 1923-24.	W.A. 1923.	Tas. 1923- 24.	Australia.
Number of factories	10	14	..	1	3	..	28
Number of employees	2,393	1,820	..	29	70	..	4,312
Actual horse-power and engines employed	903	690	..	..	16	..	1,609
Approx. value of land and buildings £	344,544	178,800	..	a	a	..	531,273
Approx. value of plant and machinery £	311,747	161,010	..	a	a	..	478,477
Total amount of wages paid during year £	397,631	332,930	..	a	a	..	674,697
Value of fuel used	11,404	7,185	..	a	a	..	618,954
Value of raw material worked up £	3,171,230	1,302,018	..	a	a	..	4,500,304
Total value of output	4,462,274	2,126,625	..	a	a	..	6,645,451
Value added in process of manufacture £	1,279,640	817,422	..	a	a	..	2,126,193

(a) Not available for publication.

(b) Including South Australia and Western Australia.

(ii) *Development in Australia.* This industry was among the first to be established in Australia. In 1861 New South Wales had eleven factories, producing 177,744 lb. of manufactured tobacco; in the same year there was one factory in Victoria, but the quantity of tobacco manufactured is not available. The Australian market has for many years been largely supplied with local manufactures. The imports into Australia during 1923-24 comprised—manufactured tobacco 480,117 lb., cigars 95,533 lb., and cigarettes 260,562 lb., while the quantities manufactured in Australian factories were respectively 14,145,146 lb., 431,048 lb., and 4,794,368 lb. The following tables show the development of the tobacco manufacturing industry in Australia during recent years:—

TOBACCO, CIGAR, AND CIGARETTE FACTORIES.—AUSTRALIA,
1919-20 TO 1923-24.

Items.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
Number of factories	37	40	38	29	28
Number of employees	4,489	4,525	4,340	4,319	4,312
Actual horse-power of engines used ..	1,144	1,186	1,203	1,466	1,609
Approx. value of land and buildings £	432,247	490,494	490,414	493,597	531,273
Approx. value of plant and machinery £	313,619	369,267	413,119	427,825	478,477
Total amount of wages paid	638,694	706,218	724,919	734,070	742,697
Value of fuel used	16,200	18,201	20,354	20,612	18,954
Value of raw material worked up	4,559,110	5,091,272	4,925,066	4,603,218	4,500,304
Value of final output	6,466,649	6,709,298	6,710,757	6,690,701	6,645,451
Value added in process of manufacture £	1,891,339	1,599,825	1,765,337	2,066,871	2,126,193

LEAF USED AND PRODUCTION.

Leaf used 1,000 lb.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
Tobacco made	16,137	16,636	16,867	17,104	17,104
Cigars	13,158	13,268	14,216	14,636	14,145
Cigarettes	552	544	508	483	431
Cigarettes	4,837	5,324	4,907	4,384	4,794

Although the manufacturing side of the tobacco industry is so firmly established in Australia, the production of locally-grown leaf is comparatively small, and manufacturers are dependent on imported leaf for the supply of their raw material. The respective quantities of Australian and imported leaf used during 1923-24 were 1,122,825 and 15,981,663 lb.

22. *Woollen, Cotton, and Tweed Mills.*—(i) *Details for each State, 1923-24.* The manufacture of woollens and tweeds was established in Australia at an early period in its history, and was under Government control, the first record in New South Wales dating back to 1801, when a few blankets were made by the convicts; the first record C.2990.—27

in Victoria was in 1867. A woollen mill was recently established at Albany in Western Australia, and the results of its operations will be included in the returns for 1924-25. The following table, which gives particulars for 1923-24 shows that the industry is now well established :—

WOOLLEN AND TWEED MILLS, 1923-24.

Items.	N.S.W. 1923-24.	Victoria. 1923-24.	Q'land. 1923.	S. Aust. 1923-24.	W.A. 1923.	Tas. 1923-24	Australia.
Number of factories	11	27	2	2	..	5	47
Number of employees	1,617	4,914	285	204	..	512	7,532
Actual horse-power of engines employed	2,880	10,412	688	299	..	1,127	15,406
Approx. value of land and buildings	328,540	843,290	a	a	..	205,925	1,426,493
Approx. value of plant and machinery	599,403	2,035,060	a	a	..	284,757	3,043,586
Total amount of wages paid during year	218,476	713,411	a	a	..	41,672	1,043,298
Value of fuel used	23,809	92,187	a	a	..	4,689	6128,487
Value of raw material worked up	522,661	2,089,136	a	a	..	81,271	2,824,176
Total value of output	934,281	3,561,480	a	a	..	139,127	4,863,657
Value added in process of manufacture	£ 387,820	1,383,157	a	a	..	53,167	1,910,994

(a) Information not available for publication.

(b) Including Queensland and South Australia.

(ii) *Development in Australia, 1919-20 to 1923-24.* The progress of woollen and tweed milling in Australia during the last four years is shown in the following table :—

WOOLLEN AND TWEED MILLS.—AUSTRALIA, 1919-20 TO 1923-24.

Items.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
Number of factories	29	34	36	40	47
Number of employees	5,029	5,783	6,101	6,928	7,532
Actual horse-power of engines used	8,705	9,617	11,630	12,347	15,406
Approx. value of land and buildings	£ 626,822	751,858	940,578	1,131,396	1,426,493
Approx. value of plant and machinery	£ 1,192,913	1,378,903	1,849,919	2,423,133	3,043,586
Total amount of wages paid	£ 560,149	762,131	842,683	991,801	1,043,298
Value of fuel used	£ 75,722	93,691	109,514	127,573	128,487
Value of raw material worked up	£ 1,865,477	2,090,892	1,940,050	2,511,204	2,824,176
Value of final output	£ 3,290,511	4,241,964	4,096,808	4,712,964	4,863,657
Value added in process of manufacture	£ 1,349,312	2,057,381	2,047,244	2,074,187	1,910,994

(iii) *Quantity and Value of Production.* The production consists chiefly of tweed cloths, flannels, rugs, and blankets, all of which have acquired a reputation for purity and durability. Detailed particulars for the several States are not available for publication. The total length of tweed and cloth manufactured in Australia during 1923-24 was 4,940,627 yards. In New South Wales 1,734,766 yards of tweed and cloth, and in Victoria 1,927,298 yards were manufactured. The production of flannel amounted to 7,617,299 yards, while blankets, shawls, and rugs to the number of 1,206,005 were manufactured.

In addition to the woollen and tweed factories there were 225 hosiery and knitting mills operating throughout Australia during 1923-24. These establishments provided employment for 6,573 persons, of whom 5,490 were females, and the value of their output amounted to £3,311,405.

Cotton ginning has been carried on intermittently in the Northern States, and the recent development in cotton growing has led to the establishment of modern ginning plants at convenient centres in Queensland. In New South Wales during 1923-24 the first up-to-date mill for the manufacture of cotton goods was erected. There were seven establishments treating cotton in Australia during 1923-24, and these employed 371 hands, while the value of the output was £361,773.

23. Boot Factories.—(i) *Details for each State, 1923-24.* Among the manufactories of Australia the boot and shoe industry holds an important place in regard to employment afforded and extent of output. The following table gives particulars of this industry for each State during 1923-24 :—

BOOT AND SHOE FACTORIES, 1923-24.

Items.	N.S.W. 1923-24.	Vic. 1923-24.	Q'land. 1923.	S. Aust. 1923-24.	W. Aust. 1923.	Tas. 1923-24.	Australia.
Number of factories	489	400	34	70	23	14	1,030
Number of employees	5,986	12,434	1,402	931	433	278	21,464
Actual horse-power of engines employed	2,126	3,157	343	356	198	101	6,281
Approx. value of land and buildings	£ 1,053,072	990,475	71,088	117,535	64,342	20,698	2,317,210
Approx. value of plant and machinery	£ 337,066	539,140	42,946	48,915	19,811	10,322	998,200
Total amount of wages paid during year	£ 919,046	1,941,075	202,640	139,354	60,403	32,570	3,295,088
Value of fuel used	£ 16,083	38,007	2,007	3,020	1,100	678	61,540
Value of raw material worked up	£ 1,355,528	2,879,194	252,394	191,596	105,357	54,860	4,838,920
Total value of output	£ 2,794,518	5,888,699	522,887	386,220	194,377	113,202	9,899,903
Value added in process of manufacture	£ 1,422,907	2,970,898	268,486	191,604	87,911	57,664	4,999,470

(ii) *Development in Australia, 1919-20 to 1923-24.* The progress of the industry in the last four years is shown in the following table :—

BOOT AND SHOE FACTORIES.—AUSTRALIA, 1919-20 TO 1923-24.

Items.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
Number of factories	532	592	744	896	1,030
Number of employees	17,987	16,573	20,390	21,487	21,464
Actual horse-power of engines used	4,462	4,746	5,130	5,837	6,281
Approx. value of land and buildings	£ 1,017,437	1,258,361	1,612,781	1,975,873	2,317,210
Approx. value of plant and machinery	£ 530,327	617,721	711,449	881,298	998,200
Total amount of wages paid	£ 2,232,746	2,198,586	3,050,125	3,302,811	3,295,088
Value of fuel used	£ 41,206	41,077	49,244	56,636	61,504
Value of raw material worked up	£ 6,661,483	5,208,627	5,291,027	5,263,889	4,838,929
Value of final output	£ 10,206,965	8,895,411	10,241,279	10,436,294	9,899,903
Value added in process of manufacture	£ 3,504,276	3,645,707	4,001,008	5,165,769	4,999,470

The inclusion of boot-repairing establishments in the returns is largely responsible for the increases recorded in the number of factories and hands employed in boot factories during the past four years. The output of boots and shoes has varied little during the period, the respective outturn for 1919-20 and 1923-24 being 12,254,191 and 12,612,261 pairs.

(iii) *Quantity and Value of Production.* The number and value of boots, shoes, and slippers made at factories in each State are shown in the following table :—

BOOT AND SHOE FACTORIES.—OUTPUT, 1923-24.

Particulars.	N.S.W. 1923-24.	Vic. 1923-24.	Q'land. 1923.	S. Aust. 1923-24.	W. Aust. 1923.	Tas. 1923-24.	Australia.
QUANTITY (,000 OMITTED).							
Boots and shoes .. pairs	3,728	7,063	811	519	316	175	12,612
Slippers pairs	510	1,107	14	41	1	3	1,676
Uppers (a) pairs	30	37	3	13	2	11	96
VALUE.							
Boots and shoes £	2,264,336	4,289,939	481,186	296,222	166,880	101,933	7,600,496
Slippers £	91,168	198,047	4,585	11,480	322	1,209	306,811
Uppers (a) £	12,760	15,688	1,481	5,774	1,009	3,817	40,529

(a) Made for other than factory use.

24. Clothing (Tailoring and Slop) Factories.—(i) *Details for each State, 1923-24.* The importance of this industry in the several States is shown in the following table :—

CLOTHING (TAILORING AND SLOP) FACTORIES, 1923-24.

Items.	N.S.W. 1923-24.	Victoria. 1923-24.	Q'land. 1923.	S. Aust. 1923-24.	W. Aust. 1923.	Tas. 1923-24.	Australia.
Number of factories	508	525	141	145	77	44	1,440
Number of employees	10,817	9,846	3,109	2,489	1,260	627	28,148
Actual horse-power of engines employed	687	561	170	122	75	40	1,655
Approximate value of land and buildings	£ 1,829,231	1,122,315	354,950	331,223	172,889	88,869	3,899,477
Approximate value of plant and machinery	£ 141,750	115,880	49,577	28,267	15,023	8,106	358,603
Total amount of wages paid during year	£ 1,351,726	1,206,472	346,538	278,934	149,560	68,839	3,402,069
Value of fuel used	£ 18,550	22,361	5,083	6,806	2,591	1,101	56,492
Value of raw material worked up ..	£ 1,830,227	2,059,904	594,425	427,975	272,362	72,809	5,257,702
Total value of output	£ 3,922,117	3,908,514	1,148,733	860,205	503,916	184,092	10,527,577
Value added in process of manufacture	£ 2,073,340	1,826,249	549,225	425,424	228,963	110,182	5,213,383

(ii) *Development in Australia, 1919-20 to 1923-24.* The development in the tailoring and slop branch of the clothing industry during the past four years, despite the high range of prices, may be accepted as an indication of the general prosperity of the community. The number of employees increased by 1,958, and the value of the output rose from £9,957,672 in 1919-20 to £10,527,577 in 1923-24. The number of persons engaged in the industry during 1923-24, however, was still 2,000 less than the highest point reached before the war. Details for the past five years are as follows :—

**CLOTHING (TAILORING AND SLOP) FACTORIES.—AUSTRALIA,
1919-20 TO 1923-24.**

Items.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
Number of factories	1,219	1,272	1,379	1,418	1,440
Number of employees	26,190	25,803	27,616	28,822	28,148
Actual horse-power of engines used ..	1,287	1,408	1,386	1,617	1,655
Approx. value of land and buildings ..	£ 2,402,571	2,753,171	3,230,794	3,445,473	3,899,477
Approx. value of plant and machinery ..	£ 220,903	263,067	290,453	328,347	358,603
Total amount of wages paid	£ 2,556,112	2,859,971	3,189,402	3,370,258	3,402,069
Value of fuel used	£ 40,941	44,042	49,525	56,194	56,492
Value of raw material worked up	£ 5,566,172	6,020,891	5,978,992	5,521,496	5,257,702
Total value of output	£ 9,957,672	10,679,919	10,782,182	10,719,900	10,527,577
Value added in process of manufacture ..	£ 4,350,559	4,614,986	4,753,665	5,142,210	5,213,383

25. Dressmaking and Millinery Establishments.—(i) *Details for each State, 1923-24.* Particulars of dressmaking and millinery establishments are given in the following table :—

DRESSMAKING AND MILLINERY ESTABLISHMENTS, 1923-24.

Items.	N.S.W. 1923-24.	Victoria. 1923-24.	Q'land. 1923.	S. Aust. 1923-24.	W. Aust. 1923.	Tas. 1923-24.	Australia.
Number of factories	222	509	53	47	65	30	926
Number of employees	3,775	8,721	1,035	1,086	696	310	15,623
Actual horse-power of engines employed ..	131	499	15	19	28	9	701
Approximate value of land and buildings ..	£ 759,372	1,057,245	66,242	72,690	79,203	12,536	2,047,288
Approximate value of plant and machinery ..	£ 30,854	93,085	9,776	7,206	7,323	1,767	155,011
Total amount of wages paid during year	£ 341,458	849,306	85,252	88,464	62,229	21,337	1,448,046
Value of fuel used	£ 3,566	12,458	673	951	622	410	18,680
Value of raw material worked up ..	£ 542,483	1,739,847	115,991	133,228	99,048	27,454	2,658,051
Total value of output	£ 1,126,918	3,135,160	233,551	273,127	170,379	60,277	4,999,412
Value added in process of manufacture ..	£ 580,869	1,382,855	116,887	138,948	70,709	32,413	2,322,681

(ii) *Development in Australia, 1919-20 to 1923-24.* The development of dressmaking and millinery establishments in Australia during the past four years is shown in the following table :—

**DRESSMAKING AND MILLINERY ESTABLISHMENTS.—AUSTRALIA,
1919-20 TO 1923-24.**

Items.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
Number of factories	854	860	910	922	926
Number of employees	17,954	16,856	16,572	16,213	15,623
Actual horse-power of engines used ..	636	673	709	693	701
Approximate value of land and buildings £	1,167,568	1,392,868	1,579,428	1,732,865	2,047,288
Approximate value of plant and machinery £	123,646	150,475	146,814	150,242	155,011
Total amount of wages paid	£ 1,237,811	£ 1,350,596	£ 1,467,066	£ 1,435,885	£ 1,448,046
Value of fuel used	£ 15,070	£ 15,864	£ 17,207	£ 18,252	£ 18,680
Value of raw material worked up	£ 2,685,382	£ 2,782,042	£ 2,695,834	£ 2,514,140	£ 2,658,051
Value of final output	£ 4,882,982	£ 4,951,519	£ 5,000,412	£ 4,815,441	£ 4,999,412
Value added in process of manufacture ..	£ 2,182,536	£ 2,153,613	£ 2,287,371	£ 2,283,049	£ 2,322,681

26. *Electrotyping, Stereotyping, Printing, and Binding Works.*—(i) *Details for each State, 1923-24.* Printing ranks high in importance among the industries of Australia. It affords employment for 25,000 employees, and pays over £5,000,000 in salaries and wages. During 1923-24 the total value of the output amounted to £14,577,413.

The following table gives particulars of these industries in each State for the year 1923-24 :—

**ELECTROTYPING, STEREOTYPING, PRINTING, AND BINDING ESTABLISHMENTS,
1923-24.**

Items.	N.S.W. 1923-24.	Vic. 1923-24.	Q'land. 1923.	S. Aust. 1923-24.	W. Aust. 1923.	Tas. 1923-24.	Australia.
Number of factories	467	416	126	85	79	21	1,194
Number of employees	9,541	8,473	3,179	1,781	1,269	919	25,162
Actual horse-power of engines employed	6,684	5,847	1,746	1,576	1,039	333	17,225
Approximate value of land and buildings	£ 2,416,242	£ 1,453,560	£ 607,147	£ 411,911	£ 289,269	£ 82,677	£ 5,260,806
Approximate value of plant and machinery	£ 2,268,361	£ 1,696,380	£ 439,708	£ 312,152	£ 287,735	£ 128,075	£ 5,132,411
Total amount of wages paid during year	£ 1,944,753	£ 1,895,981	£ 629,726	£ 350,916	£ 273,845	£ 158,372	£ 5,253,593
Value of fuel used	£ 55,298	£ 48,067	£ 21,478	£ 12,704	£ 7,676	£ 3,614	£ 148,927
Value of raw materials worked up	£ 2,023,999	£ 1,748,088	£ 457,191	£ 319,129	£ 221,642	£ 109,410	£ 4,879,459
Total value of output	£ 5,362,589	£ 5,342,617	£ 1,809,687	£ 884,950	£ 790,136	£ 387,434	£ 14,577,413
Value added in process of manufacture	£ 3,283,292	£ 3,546,462	£ 1,331,018	£ 553,027	£ 560,818	£ 274,410	£ 9,549,027

(ii) *Development in Australia, 1919-20 to 1923-24.* The development of electrotyping, printing, and binding in Australia since 1919-20 is shown in the following table :—

**ELECTROTYPING, STEREOTYPING, PRINTING AND BINDING ESTABLISHMENTS.—
AUSTRALIA, 1919-20 TO 1923-24.**

Items.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
Number of establishments	1,125	1,132	1,175	1,203	1,194
Number of employees	22,149	23,053	23,992	25,857	25,162
Actual horse-power of engines used	12,022	12,534	13,257	15,262	17,225
Approximate value of land and buildings £	3,661,054	3,976,321	4,219,547	5,134,668	5,260,806
Approximate value of plant and machinery £	3,087,143	3,392,044	3,849,895	4,613,369	5,132,411
Total amount of wages paid	£ 3,327,499	£ 4,083,732	£ 4,557,165	£ 5,182,861	£ 5,253,593
Value of fuel used	£ 105,093	£ 126,657	£ 135,188	£ 146,889	£ 148,927
Value of raw materials worked up	£ 5,003,681	£ 6,526,081	£ 6,434,932	£ 5,658,994	£ 4,879,459
Value of final output	£ 10,906,244	£ 13,845,574	£ 14,408,889	£ 15,382,650	£ 14,577,413
Value added in process of manufacture ..	£ 5,797,470	£ 7,192,836	£ 7,838,569	£ 9,576,776	£ 9,549,027

Since 1919-20 the expansion in this industry has necessitated the employment of 3,000 additional workers and 5,000 extra horse-power units, while the salaries bill increased by £2,000,000, and the value of the fuel by £40,000. The value of the final output increased from £10,906,244 to £14,577,413, or more than 33 per cent.

27. Coach and Wagon Building Works.—This industry forms one of the principal branches of manufacture in Class XI. Particulars of the operations of these establishments in 1923-24 are given in the subjoined table :—

COACH AND WAGON BUILDING WORKS, 1923-24.

Items.	N.S.W. 1923-24.	Vic. 1923-24.	Q'land. 1923.	S. Aust. 1923-24.	W. Aust. 1923.	Tas. 1923-24.	Australia.
Number of factories	208	296	59	72	48	24	707
Number of employees	1,374	2,711	429	598	334	260	5,706
Actual horse-power of engines employed	819	1,298	246	463	164	107	3,097
Approximate value of land and buildings £	281,702	366,555	67,305	98,109	52,690	33,451	899,812
Approximate value of plant and machinery £	72,895	111,420	20,450	30,192	14,790	7,331	257,078
Total amount of wages paid during year £	212,078	472,742	59,759	89,889	50,550	32,513	917,531
Value of fuel used £	11,185	15,187	1,857	6,404	3,849	1,371	39,853
Value of raw material worked up £	241,230	526,257	74,367	106,480	66,569	45,713	1,060,616
Total value of output £	678,864	1,213,054	173,281	243,578	148,902	100,830	2,458,509
Value added in process of manufacture £	326,449	671,610	97,057	130,694	78,484	53,746	1,358,040

28. Cycle and Motor Works.—This industry has made rapid progress in recent years owing to the increasing use of motor-propelled vehicles. The imposition of a heavy tariff duty on imported bodies has had the effect of establishing a local body-building industry, and the majority of cars now purchased in Australia are fitted with locally-made bodies. The classification of the various branches of this industry is not uniform in the States, consequently combined results are given in the following table. An endeavour will, however, be made in 1924-25 to obtain separate particulars in respect of motor-repairing and assembling, motor-body building and repairing, and motor cycle and bicycle building and repairing.

CYCLE AND MOTOR WORKS, 1923-24.

Item.	N.S.W. 1923-24.	Vic. 1923-24.	Q'land. 1923.	S. Aust. 1923-24.	W. Aust. 1923.	Tas. 1923-24.	Australia.
Number of factories £	543	473	58	121	67	38	1,300
Number of employees	5,602	3,680	832	3,805	437	302	14,718
Actual horse-power of engines employed	2,369	1,774	315	2,952	250	144	7,804
Approximate value of land and buildings £	2,068,790	820,145	138,382	593,617	160,526	95,490	3,876,950
Approximate value of plant and machinery £	389,958	186,815	44,936	258,197	33,997	17,696	931,599
Total amount of wages paid during year £	997,946	655,383	153,018	717,381	66,032	56,631	2,648,391
Value of fuel used £	26,380	21,879	3,950	14,123	2,331	1,135	69,798
Value of raw material worked up £	849,550	567,307	95,374	962,897	79,895	22,341	2,577,364
Total value of output £	2,342,239	1,594,925	704,515	2,079,617	176,938	99,740	6,997,974
Value added in process of manufacture £	1,466,309	1,005,739	605,191	1,102,597	94,712	76,264	4,350,812

29. Furniture and Cabinet Making and Billiard Table Making Factories.—These industries constitute the principal manufactures in Class XIII. The following table gives particulars for each State :—

FURNITURE AND CABINET MAKING AND BILLIARD TABLE MAKING FACTORIES, 1923-24.

Items.	N.S.W. 1923-24.	Vic. 1923-24.	Q'land. 1923.	S. Aust. 1923-24.	W. Aust. 1923.	Tas. 1923-24.	Australia.
Number of factories ..	252	309	93	51	41	28	774
Number of employees ..	3,620	3,480	1,254	952	575	320	10,201
Actual horse-power of engines employed ..	2,978	2,590	1,153	1,019	568	386	8,694
Approximate value of land and buildings ..	£ 648,626	624,125	170,629	91,106	102,182	39,052	1,675,720
Approximate value of plant and machinery ..	£ 196,389	137,250	64,246	42,052	29,889	19,006	488,832
Total amount of wages paid during year ..	£ 651,448	591,473	213,237	167,225	115,454	47,313	1,786,150
Value of fuel used ..	£ 15,641	16,532	6,017	4,517	2,379	850	45,936
Value of raw material used ..	£ 920,807	711,810	294,444	171,399	185,340	31,896	2,265,896
Total value of output ..	£ 1,874,520	1,663,275	687,843	431,534	287,767	101,198	5,046,137
Value added in process of manufacture ..	£ 938,072	934,933	337,382	255,618	150,048	68,452	2,734,505

30. **Electric Light and Power Works.**—Particulars of the electric light and power works of Australia are given in the subjoined table. In 1919-20 there were 264 establishments employing 3,696 hands, whose salaries and wages amounted to £716,579; in 1923-24 the figures had increased to 288 establishments, 5,488 hands, salaries and wages £1,424,114, while the production of electric light and power rose during the four years from 545,619,547 to 1,375,145,748 British units.

ELECTRIC LIGHT AND POWER WORKS, 1923-24.

Items.	N.S.W. 1923-24.	Vic. 1923-24.	Q'land. 1923.	S. Aust. 1923-24.	W. Aust. 1923.	Tas. 1923-24.	Australia.
Number of factories ..	121	90	16	17	29	15	288
Number of employees ..	1,668	1,752	578	1,006	236	248	5,488
Actual horse-power of engines employed ..	151,552	154,622	44,437	55,386	36,841	62,899	505,737
Approximate value of land and buildings ..	£ 1,975,003	1,193,505	114,514	509,646	179,641	13,199	3,985,508
Approximate value of plant and machinery ..	£ 4,475,531	5,864,065	1,361,986	1,602,909	611,114	2,969,041	16,884,706
Total amount of wages paid during year ..	£ 459,351	462,172	132,178	267,148	57,096	46,169	1,424,114
Value of fuel used ..	£ 1,084,666	624,321	79,613	216,632	133,362	5,570	2,144,164
Total value of output ..	£ 3,128,963	2,176,551	622,847	657,421	324,223	302,902	7,212,907

31. **Gas and Coke Works.**—(i) *Details for each State, 1923-24.* Gas works are in operation in nearly all the chief towns in Australia. In New South Wales there are fourteen and in Queensland two coke factories which are worked as separate industries. The subjoined table gives particulars of gas and coke works in each State for the year 1923-24:—

GAS AND COKE WORKS, 1923-24.

Items.	N.S.W. 1923-24.	Vic. 1923-24.	Q'land. 1923.	S. Aust. 1923-24.	W. Aust. 1923.	Tas. 1923-24.	Australia.
Number of factories ..	61	46	18	6	4	2	137
Number of employees ..	2,460	2,569	643	599	76	144	6,491
Actual horse-power of engines employed ..	6,888	2,057	547	1,147	69	71	10,779
Approximate value of land and buildings ..	£ 997,487	471,495	193,394	a	31,357	a	b1,748,813
Approximate value of plant and machinery ..	£ 3,388,359	1,971,715	1,130,297	a	66,801	a	b7,306,262
Total amount of wages paid during year ..	£ 603,612	700,958	150,454	a	20,098	a	b1,654,413
Value of fuel used ..	£ 183,489	7,031	9,874	a	6,465	a	b232,118
Value of raw material used ..	£ 1,705,347	844,108	140,646	a	35,278	a	b2,952,377
Total value of output ..	£ 3,542,670	2,110,977	473,270	a	87,832	a	b6,877,652
Value added in process of manufacture ..	£ 1,653,834	1,259,838	322,750	a	46,039	a	b3,693,157

(a) Information not available for publication.

(b) Including South Australia and Tasmania.

(ii) *Coal Used and Production, 1923-24.* The following table shows the quantity and value of the production of gas and coke works in each State during the year 1923-24 :—

GAS AND COKE WORKS.—COAL USED AND PRODUCTION, 1923-24.

Particulars.			N.S.W. 1923-24.	Victoria. 1923-24.	Q'land. 1923.	S. Aust. 1923-24.	W. Aust. 1923.	Tas. 1923-24.	Australia.
COAL USED.									
Coal	..	tons	1,471,199	410,517	100,663	<i>a</i>	11,949	<i>a</i>	62,095,940
PRODUCTS.									
Gas	..	1,000 cubic feet	9,395,760	5,407,962	1,234,818	<i>a</i>	204,447	<i>a</i>	617,622,101
Coke	..	tons	914,843	259,080	56,003	<i>a</i>	5,917	<i>a</i>	61,301,858
VALUE.									
Gas	..	£	1,854,747	1,673,985	473,365	<i>a</i>	71,306	<i>a</i>	64,563,837
Coke	..	£	1,292,424	259,080	53,145	<i>a</i>	9,739	<i>a</i>	61,725,399

(a) Not available for publication.

(b) Including South Australia and Tasmania.

In order to cope with the general industrial expansion, the production of gas increased from 15,978,011 cubic feet in 1919-20 to 17,622,101 cubic feet in 1923-24, while the output of coke rose from 1,052,022 to 1,301,858 tons during the same period.

CHAPTER XXIII.

WATER CONSERVATION AND IRRIGATION.

§ 1. Artesian Water.

1. **General.**—In every country in which droughts are recurrent, there are few problems the solution of which is of greater importance than that of an adequate system of water conservation. Much has been done in Australia so far as the supply of water to centres of population is concerned, and a description of several of the metropolitan water works will be found herein, viz., in the chapter dealing with Local Government. Interstate Conferences on artesian water were held in 1912, 1914, and 1921, when combined Governmental action was agreed upon with reference to delimitation of the artesian basins, hydrographic surveys, analyses and utilization of artesian water, etc. (See map on page 889.)

2. **The Great Australian Artesian Basin.**—In speaking of the "Great Australian Artesian Basin," the area is understood which includes (a) considerably more than one-half of Queensland, taking in practically all that State lying west of the Great Dividing Range, with the exception of an area in the north-west contiguous to the Northern Territory; (b) a considerable strip of New South Wales along its northern boundary and west of the Great Dividing Range; and (c) the north-eastern part of South Australia proper, together with the extreme south-eastern corner of the Northern Territory. This basin (shown approximately by the map on page 889) is said to be the largest yet discovered, and measures about 600,000 square miles, of which 376,000 square miles are in Queensland, 118,000 square miles in South Australia, 80,000 square miles in New South Wales, and 25,000 square miles in the Northern Territory. The area of the intake beds is estimated at 60,010 square miles, viz., 50,000 square miles in Queensland and 10,010 square miles in New South Wales. A description of the basin and its geological formation will be found in previous issues of the Year Book (see No. 6, p. 569).

3. **The Western Australian Basins.**—The Western Australian Basins fall naturally within five distinct groups, viz., the Eucla Basin, in the extreme south-east of the State, extending well into South Australia along the shores of the Great Australian Bight; the Coastal Plain Basin, west of the Darling Range; the North-West Basin, between the Murchison and Ashburton Rivers; the Gulf Basin, between Cambridge Gulf and Queen's Channel; and the Desert Basin, between the De Grey and Fitzroy Rivers.

The Recent and Tertiary strata which enter Western Australia at its eastern border, and which have a prevailing dip towards the Great Australian Bight, form the Eucla artesian water area. Where boring operations have been undertaken, the water has been found to be salt or brackish, and there are other conditions affecting the supply, such as local variations in the thickness of the beds, their relative porosity, and the unevenness of the floor upon which they rest, which, so far, have not been examined with sufficient thoroughness to enable many particulars to be given in regard to this basin.

In the Coastal Plain Basin to the west of the Darling Ranges artesian boring has, on the other hand, been carried on successfully for many years.

4. **The Murray River Basin.**—The Murray River basin extends over south-western New South Wales, north-western Victoria, and south-eastern South Australia. It is bounded on the west by the azoic and palæozoic rocks of the Mount Lofty and other ranges, extending northwards from near the mouth of the Murray to the Barrier Ranges, and on the east and north-east by the ranges of Victoria and New South Wales. This tertiary water-basin is occupied by a succession of sedimentary formations, both porous and impervious. It is of interest to note that the waters of the Murray River are partly

supplied by influx from the water-bearing beds of this basin; this is proved by the fact that, at low water, springs are observed at certain places flowing into it from beneath the limestone cliffs from Pyap Bend downwards. Similar springs exist along the courses of other branches of the River Murray system, where they cut through the tertiary formation. On the Victorian side bores have been put down, and water has been struck at various levels.

5. *Plutonic or Meteoric Waters.*—In previous Year Books will be found a statement of the theory of Professor Gregory* as to the origin of the water in the Australian artesian basins together with the objections held thereto by a former Government Geologist of New South Wales.† (See Official Year Book No. 6, p. 570.)

6. *Artesian and Sub-Artesian Bores.*—(i) *General.* The following table gives particulars of artesian and sub-artesian bores in each State and in the Northern Territory:—

ARTESIAN AND SUB-ARTESIAN BORES, 1923–24.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust. (c)	W. Aust.	N. Ter.	Total.
Bores existing .. No.	510	347	2,968	143	209	167	4,344
Total depth of existing bores .. feet	854,282	93,050	23,676,089	112,562	183,051	54,970	4,974,004
Daily flow .. 000 gals.	281,032	b	2,297,903	212,972	60,757	6,736	2,459,400
Depth at which artesian water was struck—							
Maximum .. feet	4,338	700	6,000	4,850	3,325	1,760	6,000
Minimum .. feet	89	150	10	55	39	62	10
Temperature of flow—							
Maximum .. °Fahr.	140	b	212	208	140	b	212
Minimum .. °Fahr.	72	b	78	82	75	b	72

(a) Flowing bores only.

(b) Not available.
all bores.

(c) Government bores only.
(e) Incomplete.

(d) Total depth of

(ii) *New South Wales.*—(a) *Artesian Water Supply.* The New South Wales portion of the great Australian basin, comprising approximately 80,000 square miles, is situated in the north-western portion of the State. Artesian boring in New South Wales dates from 1879, when a private bore was put down on the Kallara pastoral holding, between Bourke and Wilcannia. The first Government bore was that at Goonery, on the Bourke-Wanaaring road, completed in 1884.

The following statement shows the extent of the work successfully carried out by the Government and by private owners up to 30th June, 1924:—

EXISTING ARTESIAN BORES.—NEW SOUTH WALES, 1924.

Bores.	Flowing.	Pumping.	Total.	Total Depth.
For Public Watering-places, Artesian Wells, etc.	133	36	169	349,247
For Country Towns Water Supply	3	1	4	6,533
For Improvement Leases	22	5	27	39,593
Total Government Bores	158	42	200	395,373
Private Bores	223	87	310	458,909

* See J. W. Gregory, F.R.S., D.Sc.: "The Dead Heart of Australia," London, John Murray, 1906; "The Flowing Wells of Central Australia," Geogr. Journ., July and August, 1911.

† E. F. Pittman, A.R.S.M., formerly Government Geologist of New South Wales: "Problems of the Artesian Water Supply of Australia, with special reference to Professor Gregory's Theory." (Clarke Memorial Lecture, delivered before the Royal Society of New South Wales, 31st October, 1907); "The Great Australian Artesian Basin," Sydney, 1914; "The Composition and Porosity of the Intake Beds of the Great Australian Artesian Basin," Sydney, 1915.

The average depth is 1,976 feet in the case of Government bores, and of private bores 1,480 feet, and it ranges from 89 to 4,338 feet. The two deepest wells in New South Wales are those at Boronga, in the County of Stapylton, with a depth of 4,338 feet and a present outflow of 874,662 gallons; and at Dolgelly, in the Parish of Carenga, in County Stapylton, with a depth of 4,086 feet, and a present discharge of 505,980 gallons per day. The largest flow at the present time is that at the Wirrah bore, in the County of Benarba, which yields 992,943 gallons a day, and has a depth of 3,578 feet.

Of the 558 bores which have been sunk, 381 are flowing, and give an aggregate discharge of 81,031,686 gallons per day; 129 bores give a pumping supply, the balance of 48 being failures; the total depth bored represents 915,224 feet.

The flow from 79 bores is utilized for supplying water for stock on holdings served in connexion with Bore Water Trusts or Artesian Districts under the Water Act of 1912. The total flow from these bores amounts to 32,416,377 gallons per day, watering an area of 4,555,549 acres by means of 2,819 miles of distributing channels. The average rating by the Bore Trusts to repay the capital cost with 4 per cent. interest in twenty-eight years, is 1.5d. per acre, including the cost of maintenance and administration.

In the majority of cases the remaining bores are used by pastoralists for stock-watering purposes only, but in a few instances the supply is utilized in connexion with country towns.

The watering of the north-western country by means of bore water has largely increased the carrying capacity of the land; and, what is of perhaps greater importance, it has made comparatively small pastoral holdings practicable in country previously confined almost entirely to the operations of companies holding immense areas.

It having been determined that multiplicity of bores is the chief factor governing the annual decrease in bore flows, and also that limiting the discharge from a bore will prolong its flowing life, action has been taken to prevent any waste by controlling the bore flow to actual requirements. It is confidently anticipated that this action will materially reduce the rate of decrease in the future.

(b) *Private Artesian Bores.* Much has been done in the way of artesian boring by private enterprise. As far as can be ascertained, 334 private bores have been undertaken in New South Wales, of which 24 were failures. The yield of the flowing bores is estimated at 37 million gallons per day. No data are available regarding the pumping bores.

(c) *Shallow Boring.* The scheme described in Official Year Book No. 9 (p. 520) for assisting settlers by sinking shallow bores has met with considerable success.

Operations commenced with one plant only, but the number has been increased gradually until 31 plants are at work.

A large number of applications from settlers wishing to take advantage of the liberal conditions offered under the regulations has been received, and further applications are coming to hand daily, consequently the plants now in use will probably be insufficient to cope with the demand. Out of 1,393 bores put in hand up to 30th June, 1924, 259 have proved failures.

There can be no question that the added value of the holdings represented by the bores already put down is considerably in excess of their cost, and as fairly conclusive evidence of this, it might be stated that in several instances the Government Savings Bank has, on completion of a bore, made the settler a sufficient advance to enable him to pay the total cost in cash.

In addition to the work carried out under the Shallow Boring Regulations outlined above, shallow boring plants have sunk 22 bores in the Pilliga scrub and on Crown lands for the Lands and Forestry Departments.

The fact that of the bores put down in the Pilliga scrub, 52 are giving a flowing supply, adds much to their value, and is of special interest as indicating the possibility of tapping a small and hitherto unknown artesian basin.

(iii) *Victoria.* Victoria lies altogether outside the Great Australian Artesian Basin, and as water is generally available from surface or shallow underground supplies, there has not been much occasion for artesian boring. As early as 1880, however, an artesian well

was bored at Sale, which gave a large supply of water of fair quality before it failed through corrosion of the casing. In 1905 a new bore was put down, which at a depth of 277 feet yielded sufficient water to fill Lake Guthridge, a local depression. As the water was, however, impure, and contained an excess of sulphuretted hydrogen, boring operations were continued to 520 feet, when the lowering of the casing shut off the supply of water. A further bore was then put down at some distance from the first, and this, at a depth of 238 feet, yielded a fresh and clear water supply of about 145,000 gallons per day. Corrosion troubles occurred here also, and at the end of 1912 another bore was put down to a depth of 235 feet, artesian flows being struck at 187 feet and 235 feet. Towards the end of 1915 a flow of 200,000 gallons per day was struck at a depth of 125 feet on the Powerscourt Estate, near Maffra. Other bores are being put down in the locality.

Largely due to the failure of surface supplies in the drought of 1878 to 1886, no less than 499 bores were, before the end of 1888, put down by shire councils aided by the Government. The total depth bored was 40,000 feet; fresh water was struck in 78 instances; 47 yielded brackish but usable water; 229 were salt, while the balance were dry. The bores covered practically the whole of the settled portions of Northern and North-western Victoria and parts of Gippsland.

In the late eighties a number of bores was put down in the north-western part of the State, varying from 200 to over 2,000 feet in depth, but without any notable success. In 1897 a Board reported on boring for artesian water supply in the Mallee country, but this report was adverse, except as regards the extreme northern portion thereof. In 1906 eight bores were put down on the Overnewton Estate, Maribyrnong, to depths varying from 147 to 272 feet; small supplies of good and medium water for stock purposes were obtained, but only one of the wells yielded water fit for domestic purposes. In 1908 boring was commenced in the Mallee country near the border east of Pinnaroo in South Australia, and a line of bores from the Border to Kow Plains has proved the existence of a large sheet of underground water. Altogether, 94 bores have been successful in striking fresh water, and their depths vary from 155 to 752 feet, the water rising to within from 207 to 6 feet of the surface. In three instances the bores flow, the water rising from 4 to 17 feet above the surface. The fresh water extends nearly as far east as the 142nd meridian, and its northern limit is approximately the 35th parallel.

At the 30th June, 1924, the number of existing bores in use in the north-western portion of Victoria (Mallee) was 347, from which supplies are obtained by pumping. The total depth bored amounted to 93,050 feet, while the maximum and minimum depths at which water was struck were 700 and 150 feet respectively. The figures include also about 252 existing private bores, with a total depth of about 49,000 feet.

(iv) *Queensland.* A return relating to the 30th June, 1924, classifies the Queensland artesian bores under the following headings:—

ARTESIAN BORES.—QUEENSLAND, 30th JUNE, 1924.

Sunk by—	Artesian Flows.	Sub- Artesian or Pumped Supplies.	In Progress, Abandoned, or Uncertain.	Total.
Government	75	89	144	308
Local governing authorities	16	22	25	63
Private owners	1,217	1,549	988	3,754
Total	1,308	1,660	1,157	4,125

The estimated yield of water from 1,308 flowing bores on 30th June, 1924, was 297,903,010 gallons per diem. The deepest well was about 40 miles west of Blackall, lying east of the Barcoo River; this had a depth of 7,009 feet, and was stated to yield 70,000 gallons daily. The flow is, of course, a comparatively small one, many

wells yielding, when uncontrolled, from one to three million gallons a day. The waters of many of the wells have been analyzed, and some found suitable for wool-scouring only, others are suitable for watering stock but not for irrigation, owing to the presence of alkali; others again serve for both stock and irrigation, while some, such as those containing sulphuretted hydrogen, are not of any use. Water fit for stock may generally be said to be "safe" for domestic purposes in spite of its slightly mineral taste. The wells yielding the mineral waters known as "Helidon Spa," "Boonah Spa," and "Junot Spa," which are much in use in Queensland and New South Wales, are shallow wells from 60 to 200 feet in depth.

Of the 4,125 bores in Queensland, 371 have been put down by the State Government or Local Authorities, while 3,754 have been sunk by private enterprise; 1,308 bores are flowing, and 1,660 give a pumping supply, the balance of 1,157 are either in progress of construction, abandoned, or uncertain. The total depth bored is 3,676,089 feet. The minimum and maximum depths at which artesian water was struck are 10 feet and 6,000 feet respectively, while the temperature of the flow ranged from 78 to 212 degrees Fahr.

Forty-six Bore Water Supply Areas were completed on 30th June, 1924, comprising a total of 3,983,100 acres within the gazetted areas over which water was distributed in 1,790 miles of drains. Seven additional Bore Water Supply Areas were in hand on 30th June, 1924, comprising an area of 770,492 acres, and 428 miles of drains.

(v) *South Australia.*—(a) *General.* There were in South Australia 143 Government bores existing at 30th June, 1924, of which 36 were artesian and 107 sub-artesian. Of these, 105 were under 1,000 feet in depth; 23 from 1,000 to 2,000 feet; 7 from 2,000 to 3,000 feet; 5 from 3,000 to 4,000 feet; and 3 over 4,000 feet. The deepest flowing bore was at Patchawarra, on the Farina to Haddon, via Innamincka route, measuring 5,458 feet, but now yielding only 50 gallons per day. The maximum flow, viz., 1,250,000 gallons, is obtained at Coonie Creek, east of Lake Frome.

The following table gives particulars as to South Australian bores at 30th June, 1924:—

ARTESIAN BORES. (b)—SOUTH AUSTRALIA, 1924.

Particulars.						Artesian and Sub-artesian.
Bores sunk during 1923-24	..	..	..	..	No.	2
Bores existing	..	..	..	..	No.	143
Total depth of existing bores	..	..	..	..	feet	112,562
Daily flow	..	..	..	..	,000 gallons	(a) 12,972
Depth at which water was struck—						
Maximum	..	..	..	..	feet	4,850
Minimum	..	..	..	..	feet	55
Temperature of flow—						
Maximum	..	..	..	..	°Fahr.	208
Minimum	..	..	..	..	°Fahr.	82
Total cost of construction of existing bores up to 30th June, 1924	..	..	..	..	£	321,890
Expenditure during year on boring operations	..	..	..	..	£	668

(a) Flowing bores only.

(b) Government bores only.

Of the above-mentioned bores, 46 are situated within the Great Artesian Basin, and the remainder are in the Lower Murray and other local basins.

(b) *Bores between the Murray and the Eastern Boundary of the State.* The sinking of bores across the Ninety-mile Desert between the Murray and the Victorian boundary was commenced in 1886 at Coonalpyn; with the exception, however, of salt water at 55 feet, no success was met with. Ki Ki bore was sunk in 1887, and at 361 feet a good supply of water fit for stock was struck. Tintinarra bore was sunk in 1887; it was artesian when first tapped. The water was found to be fit for locomotive engines and is

still used for that purpose. The bore at Emu Flat was also sunk in 1887. In 1904 a bore was sunk at Cotton, and numerous successful bores have since been put down by the Public Works Department, and subsequently by residents of the district. The water rises to a distance from the surface of from 15 to 320 feet, and the maximum quantity obtained per diem is 48,000 gallons at the Gosden bore. Several wells, ranging in depth from 55 to 221 feet, have also been sunk in this district. The latest Government bores are Pata bore in the Hundred of Pyap, and Beulah bore in the Hundred of Wilson, at both of which large supplies of water containing $\frac{3}{4}$ oz. of solids per gallon were obtained.

(c) *Bores West of Oodnadatta.* A series of bores has been sunk, beginning with Breaden bore, 20 miles west of Oodnadatta, which was put down in 1911. The others since put down in this district are at Gypsum, Imbitcha, Mirackina, Raspberry Creek, Appreetinna, Wintinna, and Marla. Of these, the only artesian supply is at Raspberry Creek, where 1,000,000 gallons per day of good water are obtained. The depths of these bores range from 280 feet at Mirackina to 1,122 feet at Breaden, and the water from all of them is good. Warraanarrea bore situated 72 miles west of Oodnadatta on Pastoral Lease No. 1297 has been completed to a depth of 466 feet, a large supply of good water being obtained.

(d) *Eyre Peninsula.* From time to time bores have been sunk on Eyre Peninsula, but with little success. In some instances, stock water ($1\frac{1}{2}$ oz. salts to the gallon) was obtained, but this occurred only on the Nullarbor plains. In all other cases the water struck was too salt to be used. Consequently the supply of water is now principally from catchments, and a number of reservoirs have been constructed to hold from 1,000,000 to 18,500,000 gallons each, while many underground tanks have been built to contain from 40,000 up to 500,000 gallons each.

(e) *Bores Sunk during the Year.* A bore has been sunk to a depth of 100 $\frac{1}{2}$ feet at Bangham, 12 miles north of Frances, for the Sheriff's Department, and has provided a good supply of excellent water. A bore was also sunk at Yumali to a depth of 278 feet, but the water obtained was unsuitable for stock purposes, and the bore was abandoned. A bore at Charlotte Waters for the Commonwealth Government is in progress.

(vi) *Western Australia.—(a) General.* The work by which the Government of Western Australia provides a permanent supply of water to Kalgoorlie, Boulder, and adjacent districts on the eastern goldfields comes properly under the heading of "Water Supply Works." A description of this undertaking is fully given in previous issues of the Official Year Book. (See Official Year Book No. 6, p. 576.)

Statistics in connexion with the Goldfields Water Supply undertaking and the Mines Water Supplies will be found in the chapter of this book dealing with *Local Government*.

The following table gives particulars regarding Western Australian artesian bores at 30th June, 1924:—

EXISTING ARTESIAN BORES.—WESTERN AUSTRALIA, 30th JUNE, 1924.

Particulars.	State.	Private.	Total.
Bores sunk during year No.	..	6	6
Bores existing No.	109	100	209
Total depth of existing bores feet	91,905	91,146	183,051
Daily flow gallons	27,118,520	33,638,900	60,757,420
Depth at which artesian water was struck—			
Maximum feet	2,527	3,325	3,325
Minimum feet	39	70	39
Temperature of flow—			
Maximum °Fahr.	140	128	140
Minimum °Fahr.	76	75	75

To 30th June, 1924, the total number of Government bores was 109, while there were, in addition, approximately 100 private bores recorded.

(b) *The Coastal Plain Basin or Perth Area*, which, generally speaking, extends from Cape Leeuwin to Dongarra, and from which the Metropolitan Water Supply is largely drawn, yields a supply of water mostly fresh and suitable for domestic purposes, though towards the north it becomes brackish and is only suitable for stock.

There are 48 bores in the Metropolitan area, several of which have been put down to augment the hills supply and the domestic supply of the suburbs, and Fremantle is largely dependent upon this source.

(c) *The North-west Basin or Carnarvon Area* may be said to extend from Gantheaume Bay in the south to Onslow in the north, and embraces a very large tract of ideal sheep country.

Many private bores have been put down on sites which permit of the gravitation of the water for miles, and, by this means, a very considerable area has been made available for stock-raising. In all, about 75 bores have been put down.

(d) *The Gulf Basin or Broome Area*. So far very little development work has been done. Artesian bores have been put down in the town site, and the domestic requirements of the town are entirely supplied from this source. The area extends from Condon in the south-west to the Meda River beyond Derby in the north, and for a considerable distance inland. So far only 8 bores have been sunk, 3 being at Broome, 2 at Derby, and 3 on the telegraph line on the road between Derby and Hall's Creek, about 12, 67, and 80 miles inland.

(e) *Eucla Area*. This area extends from Eucla, on the South Australian border, to west of Israelite Bay. So far, beyond the bores put down on the route of the Trans-Australian Railway, very little has been done in proving the resources of this area. In 1902 the first bore was sunk, about 35 miles north of Madura, and sub-artesian water was struck at 430 feet, at an elevation of 400 feet above sea level. Following upon this, a deep bore was put down at Madura, below the cliff and nearer the coast, when an artesian supply of stock water was obtained at a depth of 2,041 feet, yielding 5,700 gallons per day. Later, about 20 bores were sunk along the survey line of the railway, which runs east and west about 90 miles inland. These bores were put in at intervals between the 205 mile peg and the South Australian border, and ranged in depth between 323 and 1,344 feet. In most instances only stock water was struck at depths varying between 300 and 1,300 feet, and the largest supply was estimated at about 10,000 gallons per day.

(vii) *Northern Territory*. In the Northern Territory, bores to the number of 167 were put down up to 30th June, 1924, which number does not include bores put down by hand-boring plants for test purposes. One bore is artesian, and the others give a pumping supply, the daily flow at the end of the year being 6,738,450 gallons. The total depth bored in State and private bores was 54,970 feet, and the maximum and minimum depths were 1,760 and 62 feet respectively.

§ 2. Irrigation.

1. *General*.—Australia's first experiments in irrigation were made with the object of bringing under cultivation areas in which an inadequate rainfall rendered agricultural and even pastoral occupations precarious and intermittent, and, although these original settlements have generally proved fairly successful, most of the States, instead of promoting new settlement in unoccupied regions, are adopting the policy of making

existing settlement closer, by repurchasing large estates, subdividing them into holdings of suitable sizes for cultivation, and selling the land upon easy terms of payment. It is in connexion with this Closer Settlement policy that the special value of irrigation is recognized.

2. *New South Wales.*—(i) *General.* The recognition of the fact that the area suitable for cultivation might be extended largely by a system of water conservation and irrigation has induced the Government to undertake various detached works and schemes, which will constitute portion of the system necessary to serve the whole State.

The system, and the works necessary to its maintenance and development within the State of New South Wales, are under the control of the Water Conservation and Irrigation Commission, which consists of the Minister for Agriculture for the time being as Chairman, and two other Commissioners. The works controlled by the Commission include the great Murrumbidgee Irrigation Scheme; the small irrigation settlements at Hay, Curlwaa (Wentworth) and Coomealla; national works of water conservation; shallow boring for settlers; and water trusts and artesian bore trusts operating under the Water Act. The Commission has control also of storages and diversions of water by private persons for purposes of conservation and irrigation.

(ii) *Murrumbidgee Irrigation Scheme.* The main features of the scheme include a storage dam across the Murrumbidgee at Burrinjuck to retain the floodwaters, which will be released for use lower down the river during the dry summer months; a movable diversion weir at Berembed, about 240 miles below the dam, to turn the required amount of water from the river into the main canal; a main canal, leaving the river near the weir; four main branch canals and a series of subsidiary canals and distributing channels through the area to be irrigated; bridges, checks, regulators and other structures throughout the entire system, and meters for measuring the volume allowed to each farm. Towns and villages, roadways to serve each farm, and a general surface drainage system, are also included in this scheme.

Further details in respect of the storage dam, diversion weir and canals, together with the areas thrown open for settlement and the conditions of tenure, are contained in previous issues of the Official Year Book. (See Official Year Book No. 15, page 442.)

The irrigation area is situated on the northern side of the Murrumbidgee River, where it is anticipated that there will ultimately be upwards of 200,000 acres under irrigation in blocks devoted to fruit and vegetable growing, dairying, stock-raising, etc. With the aid of irrigation, the soil and climate of these areas are suitable for the production of apricots, peaches, nectarines, prunes, pears, plums, almonds, melons, cantaloupes, and citrus fruits, also wine and table grapes, raisins, sultanas, figs, olives, and most varieties of vegetables and fodder crops. Dairying and pig-raising are being undertaken by large numbers of settlers in the areas, and the canning and drying of fruit and the production of wine are industries of large dimensions. The district is one of the greatest fresh fruit producing centres in the State.

An up-to-date butter factory, which is managed co-operatively by dairymen on the areas, is in operation at Leeton. The output for the year under review was approximately 405 tons, from 240 suppliers. The factory supplies ice to town residents and settlers. A fruit-canning factory has also been provided, which purchases fruits grown by the settlers, and operates on a large scale. Co-operative companies have been successfully floated for the handling of fruit not suitable for canning. Successful pooling schemes have been evolved for the economic handling of fresh fruit. A bacon factory and abattoirs under the same management as the butter factory have been erected at Yanco, where the settlers' pigs are treated, and where stock for butchers is slaughtered for local consumption.

The Department of Agriculture, which controls the Yanco Experimental Farm, has also established at Griffith (Mirrool irrigation area), a viticultural nursery for the propagation of vines.

An electric power station having been erected near Yanco Railway Station, electric light and power are supplied to the various factories, business people, and residents of Leeton, Griffith, Yenda, and Yanco, and the supply is also available for settlers when the number of applicants in any centre warrants the connexions being made.

On the 30th June, 1924, 2,061 farms were held, representing a total area of 116,000 acres. The number of town blocks held was 879.

In the matter of cultivation, the following particulars indicate the extent of the work performed by the settlers :—There are approximately 8,659 acres under deciduous fruits, 5,811 under citrus fruits, and 6,032 under vines. The estimated population of the area is about 12,080.

(iii) *Curlwaa Irrigation Area.* The Curlwaa irrigation area is situated on the Murray River near its junction with the Darling River, and comprises 10,600 acres, of which on 30th June, 1924, irrigable holdings consisting of 1,966 acres had been taken up in areas of $1\frac{1}{2}$ to 40 acres, with a leasehold tenure of 30 years, at rentals of from 1s. to 10s. per acre per annum for the most part, and up to 35s. per acre in some blocks set apart during recent years. Of the balance, 7,563 acres were leased as non-irrigable holdings for short terms, in the majority of cases up to five years, with rentals of from 7d. to 5s. per acre, while the remainder of the area is made up of roads, channels, and other reserves. Of the irrigable area, 1,164 acres are planted as orchards and vineyards, of which 890 acres are in full bearing. There is also a small area under lucerne. It has been proved that the Curlwaa soil is eminently suited to the growth of citrus and other kinds of fruit, and some of the finest oranges grown in New South Wales are produced on this area.

The estimated weight of dried fruits produced on the Curlwaa area in the year 1923–24 was 14,674 cwt., the principal yields being sultanas, 6,244 cwt.; peaches, 1,507 cwt.; and currants, 3,751 cwt. The value of the dried fruit production was estimated at £56,951, while fresh fruit, crops, and other produce of the value of £18,732 were also produced.

Water is pumped from the Murray River by a suction gas plant in 3 units, with a total capacity of 12,500 gallons per minute and a lift of about 36 feet, and is supplied to the lessees at a flat rate of 20s. per acre per annum. There is also a general rate of 14s. per acre per annum upon the portion of the irrigated area in productive bearing. During the season 1923–24 the quantity of water supplied was 223,000,000 cubic feet, or 5,128 acre-feet, the average area watered during five irrigations being 1,462 acres. Each lessee is entitled to receive a quantity of water equivalent to a depth of 30 inches per annum.

A section of 525 acres comprising 395 acres of irrigable land has been excised from portion of the area previously held under dry lease, and has been subdivided into 23 irrigable blocks which will be available for selection at a later date.

(iv) *Hay Irrigation Area.* The Hay irrigation area consists of about 4,500 acres, of which on 30th June, 1924, the area held and used for irrigation purposes was 1,035 acres, in 108 blocks of from 3 to 34 acres. The term of lease is generally 30 years, and the annual rental from 5s. to 12s. per acre. In addition, there was at that date an area of 2,876 acres of non-irrigated land taken up in 50 blocks for short terms up to five years, with rentals of from 1s. to 10s. per acre. Water is lifted from the Murrumbidgee River by suction gas-driven pumping machinery in 2 units, with a total capacity of 4,000 gallons per minute, and a maximum lift of 30 feet. The rate charged to settlers is £1 10s. per acre per annum, but no general rate is levied as at Curlwaa. During the 1923–24 season 128,504,825 cubic feet of water were pumped with eight pumpings. The principal industry is dairying, milk being supplied to the town of Hay, and cream to the local butter factory.

(v) *Projected Irrigation Schemes.*—(a) *General.* The Water Conservation and Irrigation Commission is investigating schemes for utilizing the New South Wales share of the Murray waters, and for storing water for the purpose of irrigation and stock and domestic supply on the Lachlan, Macquarie, Hunter, Namoi and Peel Rivers.

(b) *Murray River.* The effect of constructing the Upper Murray storage will be to ensure at all times sufficient flow below Albury to permit of diversions for irrigation and stock and domestic supplies, and also to make good the losses in the river due to

seepage, evaporation, and lockages. The Act provides that, subject to certain conditions, New South Wales and Victoria shall share the regulated flow of the river at Albury, and shall each have the full use of all tributaries of the River Murray within its territory below Albury, with the right to divert, store, and use the flows thereof.

It is estimated that the New South Wales regulated river flow after the construction of the Upper Murray storage will amount to at least 120,000 acre-feet per month at Albury during the irrigating season, and this will permit of a considerable amount of irrigation development along the river.

An investigation is being made into the manner in which the New South Wales proportion of the Murray waters can be most profitably applied, but as yet no conclusion has been reached.

(c) *Lachlan River.* The construction of a storage reservoir at Wyangala, below the confluence of the Abercrombie River, is being investigated with the intention of providing water in the river channel for pastoral purposes and for the irrigation of limited areas along the river banks. A proposal is also being investigated for the increase of the storage in Lake Cudgellico, which is fed from the Lachlan River, portion of the stored water being released in the summer months to supplement the flow of the river when necessary. The possibility of constructing a series of low weirs between the towns of Cowra and Booligal is also receiving consideration.

(d) *Macquarie River.* The construction of a storage reservoir on the river at Burrendong, below the confluence of the Cudgegong River, for the purpose of affording water for irrigation and stock and domestic supply below Wellington is now being investigated. Smaller schemes for the construction of storage dams at White Rock and on Campbell's River, at Bathurst, have also received consideration. Systematic gaugings are being made of the river flow with a view to determining the quantity of water which will be available if the storage dam be constructed.

(e) *Hunter, Namoi, and Peel Rivers.* Pumping by licensed private irrigators under the Water Act is increasing at such a rapid rate that in the case of some of the rivers, such as the Peel and the Hunter, it will not be possible to adequately supply the pumps in dry seasons until head storage works have been constructed. Investigations are in progress for storage dams on the Hunter and Peel Rivers, for dams on the Namoi River above Manilla, and lower down above the junction of the Peel River at alternate sites.

(f) *Coomoalla Area.* In their report of 20th September, 1922, the Murray Lands Advisory Committee recommended that an irrigation district of some 20,000 acres, including a small adjacent portion of Gol Gol, be established at Nine Mile, and subdivided into farms of from 15 to 20 acres. The development of such area to be by gradual stages. This area, which is situated on the Murray River, about 9 miles by road from Wentworth, upstream, has since been named Coomoalla. At the end of July, 1923, instructions were given to proceed with the preparation of the first section of 3,000 acres, and the necessary works in connexion therewith were well advanced at the 30th June, 1924.

Water for irrigation will be pumped from the Murray River by a steam-driven pumping plant of two units, with a total capacity of 38 cubic feet per second, through an electrically-welded steel rising main, 5 feet 6 inches diameter. This main will be of sufficient capacity to deal with the whole area, about 8,000 acres, which can be commanded by the lower lift. Until the completion of the lock and weir now in progress at Mildura the lift may reach 81 feet, but when pumping later from the lock pool this will be reduced to 74 feet. The balance of the 20,000 acres referred to above will require a higher lift.

In view of the friable nature of the soil, the whole of the supply channels are being lined with concrete or cement mortar. Following the usual practice on the Murray River, water will be charged for at a flat rate and meters will not be installed. The works include drainage channels, structures, and roads, care being taken to leave standing timber, wherever possible, along the road boundaries to serve as wind-breaks. The development is being carried out partly by contract, partly by day labour.

(vi) *Water Rights.* By Part II. of the Water Act 1912, the right to the use and flow and to the control of the water in all rivers and lakes which flow through, or past, or are situate within the land of two or more occupiers is vested in the Crown. Private rights are almost wholly abolished, riparian law is simplified, and a system of licences is established for the protection of private works of water conservation, irrigation, water supply, drainage and the prevention of inundation of land. The enactment prevents litigation and determines the rights of riparian owners.

During the year ending 30th June, 1924, 195 applications were received for fresh licences, comprising 133 in respect of pumps, or pumps in conjunction with dams or other works, 39 in regard to dams, and 23 other works. The number of applications received for the renewal of existing licences was 184; 111 of the applications were in respect of pumps, in some cases used in conjunction with dams or other works, 69 respecting dams, and 4 races and other works. Approximately 1,696 licences were in force on the 30th June, 1923, and in the succeeding twelve months 176 new licences were issued and 26 were allowed to lapse, so that there were about 1,846 licences current on the 30th June, 1924.

(vii) *Water Trusts and Bore Trusts.* Part III. of the Water Act 1912 provides for the supply of water either for irrigation, stock, or domestic purposes, or for drainage. The liabilities thereon are repaid to the Crown, with interest spread over a period of usually 10 or 28 years, and the works are administered by trustees appointed from among the beneficiaries under the Act, except in the case of trusts in the Western Division, where the Western Land Board is appointed as trustee. For the supply of water, trusts have been constituted in connexion with (a) eighty-three artesian wells; (b) nine schemes for the improvement of natural off-takes of effluent channels, for the purpose of diverting supplies from the main rivers; (c) in four instances for the construction of weirs across stream channels; (d) three pumping schemes, two from natural water-courses, and one from a well; and (e) one for impounding by means of regulators water which flows into natural lakes. The total area included within these trusts amounts to 7,922,987 acres.

3. *Victoria.*—(i) *General.* The Water Conservation Works in Victoria consist of irrigation works proper, and those providing mainly a domestic supply, such as the works for the supply of Melbourne, controlled by the Melbourne and Metropolitan Board of Works; the Coliban, Wonthaggi, Broken River, Kerang Lakes, Naval Base and Mornington Peninsula, and Mallee Supply Works administered by the State Rivers and Water Supply Commission; and other works of domestic supply controlled by Water Works Trusts or Municipal Corporations. Particulars of the works not controlled by the Commission will be found in the chapter on Local Government in this volume. With the exception of that of the First Mildura Irrigation and Water Supply Trust, all the irrigation schemes, and the more important domestic and stock water-supply works in rural districts, are vested in and controlled by the State Rivers and Water Supply Commission, a body composed of three members, which was created by the Water Act 1905, now incorporated in the Water Act 1915.

(ii) *Irrigation Schemes.* (a) *General.* This division comprises the schemes constructed and under construction for the supply of water to some twenty-five irrigation districts. Up to 1906 irrigation schemes were controlled by local Trusts, which had obtained the moneys for their construction on loan from the State. By the Water Act 1905 all local control was abolished except in the case of Mildura, and the districts were transferred to the State Rivers and Water Supply Commission. Since that date the Government has adopted a vigorous irrigation policy, and the capital expenditure at 30th June, 1924, on water supply for the irrigation and water supply districts under the control of the Commission and at Mildura, exclusive of the amount of £816,000 expended by it on River Murray Agreement Works, was £7,012,000. The irrigation works draw their supplies mainly from headworks constructed on the Goulburn, Murray, and Loddon Rivers. The cost of these headworks, which now stands at £1,126,000, is not debited to any particular districts, but is borne by the State. The extent of land under irrigated culture last year for all kinds of crop was 324,558 acres, an excess of 13,127 acres on the average of the last four years.

(b) *Goulburn Irrigation System.* The Goulburn Irrigation System (see Official Year Book No. 13, map on page 561) is the largest project of the kind in Victoria. The need for irrigation in the Goulburn Valley is indicated by its low annual rainfall, 18 inches, while the great variation in the rainfall over the catchment area, 20 inches to 52 inches, in the rate of flow, 180 cusecs* to 80,000 cusecs, and in the volume of the annual river discharge, 620,000 acre-feet to 6,200,000 acre-feet, reveal clearly the necessity for regulating the river flow by storage. The progress made in this direction is shown by the fact that the existing storages of this system will hold some 400,000 acre-feet. The completion of works under construction will increase this to 654,000 acre-feet, which added to 300,000 acre-feet divertible direct from the river, brings the total artificial supply to 954,000 acre-feet.

The Goulburn Scheme was inaugurated by the construction of the diversion work known as the Goulburn Weir, near Nagambie, which was commenced in the year 1887 and completed in 1891. It is built of concrete masonry, backed with coursed granite blocks. It is 695 feet in length over the abutments, exclusive of the space occupied by the channel regulators—a further 230 feet—or 925 feet in all, and raises the summer level of the river about 45 feet, to 408 feet above sea level, the height necessary to command the lands to be irrigated. The weir is provided with 21 flood-gates of wrought and cast iron, each gate being 20 feet by 10 feet and weighing 7 tons. To provide a clear waterway for the discharge of floods these gates are lowered into recesses in the body of the structure during high stages of the river flow. The gates are raised and lowered by means of screw-gearing operated by three turbines, the motive power being derived from the river water.

The water is diverted by two main channels, the eastern carrying 660 acre-feet per day a distance of 32 miles to the Shepparton Irrigation District, north of the Broken River, while the western channel, with a capacity of 3,434 acre-feet per day, and a length of 23 miles, supplies the eastern half of the Rodney main channels, and fills Waranga Reservoir, the present principal storage basin of the scheme.

Waranga Reservoir has been formed out of a natural depression 6,000 acres in extent and some 6 feet deep. The construction of an earthen embankment $4\frac{1}{2}$ miles long formed a reservoir covering about 19 square miles to a mean depth of nearly 21 feet. This work was commenced in the dry year 1902 and completed in 1905 to a capacity of 201,300 acre feet. The progress of closer settlement and the increasing demand for water led to the enlargement of the embankment so as to raise the water level 10 feet. This work, recently completed, increased the length of the embankment to $4\frac{1}{2}$ miles, the submerged area to 23 square miles, and the storage capacity to 333,400 acre-feet.

Two main channels issue from this reservoir—the Waranga—Rodney—capacity 500 acre feet per day, which feeds the western half of the Rodney Main Channels, and the Waranga Western Main Channel—98 miles in length—which leaves the reservoir with a capacity of 2,000 acre feet per day, crosses the Campaspe River as a reinforced concrete syphon, and reduces to 400 acre feet per day at the Loddon, the present termination. At this junction, an embankment is being formed and a concrete weir provided, with a view to diverting either the flow of the Loddon or water from Waranga Reservoir for the supply of the country to the west of the river.

In view of the continually increasing demand for water in dry seasons, and the repeated requests for extensions of the system; the Commission had investigations made to determine the most suitable site for an additional storage reservoir. After a number of sites had been examined as to foundations, probable storage capacity, and estimated cost, the Commission adopted what is known as the Sugarloaf site, just below the junction of the Goulburn and Delatite Rivers, as the most economical. The first section of the dam, which will be carried to a height of 135 feet above the river bed, has its foundation in places 75 feet below the natural surface. This section will have an over-all length of 3,000 feet, of which 2,300 feet will consist of "rock fill" bank with a reinforced concrete core wall, the remaining 700 feet being of mass concrete, and forming a flood spillway. The first section of the work will submerge an area of 7,600 acres and permit the storage of 300,000 acre-feet of water, of which about 60,000 can now be impounded, and the design provides that the dam may ultimately be carried to a height of 190 feet from the river

* Cusecs = Cubic feet per second.

bed. The dam so raised would submerge 16,200 acres and impound 918,000 acre-feet. The catchment area above this reservoir is 1,500 square miles. The storing of water was commenced in 1922.

The portion of the State at present served by the Goulburn system comprises 21,000 acres east of the river, 565,000 acres between the Goulburn and the Campaspe, and 284,000 acres between the Campaspe and the Loddon. These areas include the irrigated closer settlements at Shepparton, Stanhope, Tongala, Rochester, Echuca North, and Dingee, as well as the districts formerly controlled by the Rodney and Tragowel Plains Trusts, where the holdings are larger than in closer settlement areas. The main channels of the system have an aggregate length of 150 miles, in addition to which there are 1,650 miles of distributaries, a total for the whole system of 1,800 miles.

The balance of the area, including Deakin District, is provided with a domestic and stock supply, and water is sold for occasional irrigation on application. The amount of the compulsory charge for irrigation water allotted as a "right" is at present 7s. per acre-foot in the two districts—Tragowel Plains and Dingee—farthest removed from the sources of supply, and 6s. per acre foot elsewhere.

Following strong demands for the extension of existing districts and the provision of an irrigation supply for new areas, the Commission is having the eastern main channel enlarged for its whole length, and extended to command large areas of land north of Shepparton District, and to serve also the suitable lands commanded south of the Broken River. These works are so far advanced that a certain amount of water is being delivered to some of the latter lands, and a new Irrigation District, "South Shepparton" of 14,000 acres is being constituted, in which water rights will be allotted of one acre-foot of water to each acre of irrigable land. The Waranga western main channel is being extended to the west side of the Loddon, to improve the supply to Boort District; and a new channel, from the Waranga main channel near Tandarra, through Calivil, to the No. 1 main of Tragowel Plains district, is already under construction. Satisfactory progress has been made with these works, which will have the effect of strengthening existing supplies, and of bringing large areas of new irrigable land under irrigation in the near future.

(c) *River Murray Irrigation Schemes.* The group of irrigation schemes for the service of the districts along the frontage of the River Murray, and drawing supplies direct from that river, ranks next in importance in point of development to the Goulburn Irrigation System. These schemes already supply an area of 364,000 acres, served by 1,080 miles of channels, and are capable of considerable expansion when the Hume Storage Reservoir, now under construction, becomes operative.

The districts supplied are all situated in the portion of the Murray Valley below the town of Echuca, and in an area of comparatively low rainfall. Those between Echuca and Swan Hill, excepting Tresco, are supplied by gravitation, while the Tresco district, and those lower down the river—Nyah, Merbein, Mildura and Red Cliffs—are supplied by pumping.

The present headwork of the gravitation schemes is a weir and lock at Torrumbarry—some 20 miles (by road) down-stream from Echuca—constructed under the powers conferred by the River Murray Waters Acts, the constructing authority being the State Rivers and Water Supply Commission.

This weir was commenced early in 1919 and completed in the latter part of 1923. It raises the summer level of the river by some 16 feet, and thus substitutes continuous diversion for the intermittent diversion hitherto dependent on the varying level in the river, and at the same time provides for the passing of river craft but without offering serious obstruction to the passage of floods.

These objects have been achieved by the construction of a concrete foundation, combined with movable steel trestles, which support stop bars to the height necessary to keep the river at diverting level. In times of flood the bars, and if necessary the trestles themselves, are removed to the river bank.

The effect of this work, as regards irrigation, is the ensuring of a regular supply by gravitation throughout the year to the districts between Torrumbarry and Swan Hill. The districts first benefited by this supply are those known as Cohuna, Gannawarra, Koondrook and Swan Hill, comprising in all 172,000 acres on the river frontage (hitherto

dependent on pumping plants during low stages of river flow), and the Kerang districts and adjacent areas, containing about 100,000 acres, more distant from the river, and receiving a more or less irregular supply, by gravitation, from the Kow Swamp Free Head-works. These headworks comprise a gravitation offtake at the effluence from the Murray of the Gunbower Creek, a main channel thence (the Gunbower Creek improved) to Kow Swamp Reservoir, a natural depression improved so as to hold 40,860 acre feet, and a main supply channel therefrom (the Macorna channel) westward to the Loddon River.

The quantity of water allotted as a "right" in these districts is one acre-foot per irrigable acre. The compulsory charge is at present 6s. per acre-foot of such water right in Swan Hill district, and 7s. per acre-foot in the other three districts. In Kerang district—not yet under a compulsory irrigation charge—water is sold to irrigators on application at a charge not exceeding 3s. per acre foot of water supplied. The districts supplied include the Cohuna, Koondrook, and Swan Hill Closer Settlement Estates, comprising in all 33,000 acres. Of this area 8,000 acres were specially purchased for soldier settlement, the channel systems being correspondingly extended.

In addition to improving the supplies to existing irrigation districts, the Torrumbarry weir will enable large areas adjacent to these districts to be commanded by extensions of existing gravitation channel systems. The most important works now under construction for this purpose are (a) the Gunbower-Cohuna Main Channel, which with the necessary distributaries will provide water for irrigation for the Leitchville area of 10,000 acres situate between Kow Swamp State Works and the Cohuna Irrigation District, and (b) the Third Lake Main Channel and distributaries, which will convey supplies for the irrigation of some 13,000 acres of land lying between that Lake and the Little Murray River.

Extensions of irrigation schemes dependent on the River Murray, hitherto impracticable owing to lack of storage on that river, will be rendered possible on the completion of the Hume Reservoir. This storage work, now in course of construction jointly by the States of New South Wales and Victoria, is one of the works authorized by the River Murray Waters Acts. Detailed reference to this undertaking will be found at the end of this section.

The irrigation areas supplied by means of pumping, and not commandable by gravitation from the Torrumbarry offtake, stated in geographical order, are the Tresco Irrigation district, the Nyah and Merbein Murray Frontage Settlements, the First Mildura Irrigation Trust District, and the recently established Red Cliffs Soldier Settlement.

The Tresco District of 4,000 acres, created by private enterprise, and recently taken over by the State Rivers and Water Supply Commission, is supplied by water lifted from Lake Boga by pumps throwing 80 acre-feet per day. Its channel mileage is 50. The water supplied is $2\frac{1}{2}$ acre-feet to each irrigable acre, and the compulsory charge at present £2 per acre.

The Nyah Irrigation Area is supplied with water diverted from the Murray by a high-lift pumping plant—capacity, 94 acre-feet per day. The total length of the channels is 51 miles. The settlement contains 3,800 acres, subdivided into 237 holdings of an average area of 15 acres—practically all settled. The settlers include 60 discharged soldiers. Water rights are apportioned to these holdings on the basis of $2\frac{1}{2}$ acre-feet of water for each irrigable acre, and the compulsory charge is at present 20s. per acre-foot of such water rights. The land is devoted mainly to vineyards and orchards, and the settlers, taken as a whole, are making good progress. The value of irrigation to the district is reflected in the selling price of the land, fully planted blocks bringing remarkably high prices.

The Merbein Irrigation Area comprises 8,300 acres, originally Crown lands. This settlement now contains 410 holdings, averaging 20 acres each, all of which are settled, the settlers including 166 discharged soldiers. The water is obtained from the Murray by pumps, which deliver 225 acre-feet per day. The main and distributary channels have a combined length of 60 miles. The land settlement conditions and the water rights apportioned are the same as at Nyah, but the compulsory charge is 24s. per acre-foot.

The Red Cliffs Irrigation Settlement comprises 15,000 acres of first class irrigable land adjoining the Mildura Settlement. It is the irrigable portion of the large Red Cliffs estate of 33,000 acres, known as the Debenture Holders' Land, acquired by the State for soldier settlement. The scheme of works for this district, when completed, will rank first in importance among Victoria's pumping systems. It includes a pumping plant capable of delivering 500-acre feet of water per day, lifted 105 feet, a reinforced concrete rising main 6 feet 6 inches in diameter, 34 chains long, two electric generators each of about 350 k.w. capacity, to provide for re-lifts, and a system of main and distributary channels to command every holding in the district. The three pumping units have already been installed and are in operation. The total length of channels constructed to date is 121 miles, the excavation involved totalling 661,000 cubic yards. Some 700 discharged soldiers have been allotted blocks on this settlement.

The area planted to date consists of 7,000 acres of vines and 500 acres of citrus trees. The first harvest (1924) returned 570 tons of dried fruit, in addition to which large quantities of table grapes were sold for consumption. About 400 blocks will be in bearing by next season and it is anticipated that the yield of dried fruit for the 1925 season will approximate 4,000 tons. A co-operative packing shed recently established handled the bulk of the 1924 crop, and is being extended to cope with next season's harvest.

(d) *Loddon River Scheme.* This also is wholly a gravitation system, with a regulating weir on the Loddon at Laanecoorie as its headwork. Its storage capacity is 14,000 acre feet, and other works include timber diversion weirs at Serpentine and Kinypanial, and 160 miles of channels in the Boort district, which supply an area of 74,000 acres for domestic and stock purposes and partial irrigation.

(e) *Werribee River Schemes.* (1) *Bacchus Marsh.* The headwork of this gravitation scheme is a reservoir of 15,000 acre-feet capacity on Pyke's Creek, a tributary of the Werribee, the intake from the creek catchment being supplemented by a tunnel through a dividing spur, which taps the Werribee River near Ballan. The area of the district is 6,700 acres—half of which is irrigable—and includes some of the richest lucerne land in the State. The annual water right is one acre-foot per irrigable acre, and the present compulsory charge is 22s. 6d. per acre-foot of such right. The higher portion of the district receives a supply for domestic and stock purposes.

(2) *Werribee.* This is another gravitation scheme on the same river, with a reservoir at Melton as its headwork. The irrigation district comprises 10,000 acres of first-class land, being the irrigable portion of the Werribee Closer Settlement Estate, which is within 20 miles south-westerly of Melbourne. The water-right allotment is one acre-foot per irrigable acre, and the charge at present is 12s. per acre-foot. The non-irrigable portion of the estate, containing about 13,000 acres, is supplied with water for domestic and stock purposes.

(f) *Macallister River (Maffra) Scheme.* The works of this scheme, now in course of construction, comprise a storage reservoir on the Macallister River, at Glenmaggie near Heyfield, and a system of main and distributary channels capable of commanding by gravitation some 80,000 acres of the rich river flats along the Macallister, Avon, and Thomson Rivers, near Maffra, Stratford, and Sale. The conditions in these areas as to quality of lands and annual rainfall are similar to those at Bacchus Marsh and Werribee before irrigation. The design for the dam—a large cyclopean concrete structure—provides for the raising of water to a maximum height of 100 feet above the foundations. The capacity of the storage will be 150,000 acre-feet, while the unregulated flow of the river will yield an additional 100,000 acre-feet. The construction of the works is well advanced, and it is expected that during the coming year about 50,000 acre feet of water will be stored, and the settlers on the Boisdale Closer Settlement portion of the district will be supplied with water. The commanded lands are specially suitable for beet culture and dairying, and include some 10,000 acres acquired by the State Rivers and Water Supply Commission for soldier settlement. Outlets for the produce of irrigated farms are already provided by the sugar, butter, and condensed milk factories, which are within easy reach; while the proximity to railway stations ensures to settlers the necessary transport facilities.

(iii) *Domestic and Stock Schemes.* (a) *General.* The second division takes into account the schemes constructed and under construction for the supply of water for domestic and stock purposes, the capital expenditure on which at 30th June, 1924, was £6,553,000. The area of country lands artificially supplied with water for these purposes is nearly 21,300 square miles. The number of towns supplied, exclusive of the City of Melbourne and its suburbs, is 185, serving an estimated population of 347,600. In addition to the Commission's districts, some large areas are still administered by local authorities.

(b) *Wimmera-Mallee System.* The principal scheme in this division is that known as the Wimmera-Mallee Gravitation Channel System. This comprehensive scheme of works will compare favourably, it is believed, with any similar individual scheme for domestic and stock service, in any part of the world. The main supply is drawn from four reservoirs in the catchment area of the Wimmera River, at the foot of the Grampians Ranges, viz.:—Lake Lonsdale, Wartook, Fyans Lake, and Taylor's Lake. The reservoirs in use, including some minor works, have a combined storage capacity of 149,000 acre-feet. The completion of the works in progress will bring this total to 210,000 acre-feet. The water is conveyed partly by natural water-courses but chiefly by artificial channels aggregating over 4,800 miles in length over farming districts comprising about 11,000 square miles, approximately one-eighth of the whole State (see Official Year Book No. 13, map on page 562).

(c) *Northern Mallee Water Supply Scheme.* In what is known as the northern Mallee, an area of about 1,250,000 acres, adjoining the Wimmera-Mallee Gravitation Channel System, but above its channel level, the Commission has provided a water supply for the large wheat holdings in the Walpeup and adjoining districts, by means of bores and large public tanks. The number of successful Government bores in use in this area is 95, their average depth being 420 feet. There are also 196 tanks, having a total capacity of 1,052,780 cubic yards, or 177 million gallons.

(d) *Millewa Scheme.* This recent and important addition to Victoria's water supply schemes for domestic and stock purposes is designed to serve 1,000,000 acres of the extreme northern Mallee between the Mildura railway and the South Australian border, which is being opened up for settlement by this water supply scheme, and the construction of 51 miles of railway from Red Cliffs westward toward South Australia. The water for this extensive area will be drawn from the River Murray. The scheme comprises two main lifts, of about 125 and 150 feet respectively, the first lift being from Lake Cullulleraine on the flats 5 miles from the Murray. This lake, the main storage of the scheme, which holds 2,000 acre-feet, will be filled from No. 9 Lock now in course of construction. Holdings aggregating 200,000 acres have already been allotted to settlers, and, for the service of this area, 210 miles of channels have been excavated, and 14 earthen storages, with a combined capacity of 250,000 cubic yards, have been constructed at convenient distances from railway stations. The first unit of the pumping scheme and the rising main having been completed, water was turned into the channels and storages early in 1924, and in May and June of that year the whole occupied area received a supply of water by channel. The extension of the pumping stations to their final capacity is being proceeded with. The construction of the remaining works of the scheme will precede the throwing open of additional lands for settlement.

(e) *The Coliban System* comprises two main storage reservoirs on the Coliban River, on the northern slope of the Dividing Range, the "Upper Coliban" with a capacity of 22,500 acre-feet, and "Malmsbury" with a capacity of 12,300 acre-feet, together with main and distributory channels aggregating 340 miles in length, 23 subsidiary reservoirs, and 300 miles of urban pipe reticulation. This scheme supplies water for domestic and stock purposes to the city of Bendigo, also to Castlemaine, Maldon, and eighteen other townships, and the interjacent rural districts, containing in all some 235,000 acres. The population served is 61,000. This system also supplies the demands of the quartz and sluice mining industries throughout this area, and provides water for irrigation for orchards, market gardens and similar purposes, the area irrigated annually being about 6,000 acres.

(f) *Naval Base and Mornington Peninsula Scheme.* Another scheme in this division which calls for mention here is the Naval Base and Mornington Peninsula Scheme. This comprehensive scheme—prepared at the request of the Naval Authorities—is for the supply of water to the Flinders Naval Base, and for the service of fifteen townships *en route*, including Berwick, Beaconsfield, Pakenham, Aspendale, Chelsea, Carrum, Frankston, Mornington, and Hastings. An ample supply of water is obtainable both for ordinary domestic and stock use and for market gardening, in the vicinity of Dandenong, from the headwaters of the Bunyip River, which drains some 30 square miles of forest country above the point of off-take. The works are so far advanced that water is already being delivered at the Naval Base, and to the townships of Mornington, Frankston, Carrum, Aspendale, and the intervening bayside resorts, as well as the inland townships of Beaconsfield, Berwick, Cranbourne, Somerville, and Bittern.

The scheme has been extended to supplement the supply to the township of Dandenong, hitherto controlled by a local Trust, the works of which were recently transferred to the Commission, which will administer them as part of the general scheme.

An important development of this scheme was the purchase by the Commission of 3,200 acres of land in the vicinity of Narre Warren, on the main Gippsland railway, for closer settlement under irrigation. This land, which is within about 25 miles of the metropolis, is being subdivided into blocks of 10 to 15 acres, suitable for market gardening and other forms of intensive culture. Drainage works will be provided where necessary, and every block will receive a satisfactory supply of water under pressure from a pipe system connected with the main race. Electricity for all purposes will be available from the works of the Electricity Commission. The land will be settled under the ordinary closer settlement conditions.

(g) *The Kerang North-West Lakes Works* consist of a chain of lakes, situate a few miles to the north-west of Kerang, connected by channels to each other and to the Loddon River, and improved so as to be capable of storing 88,500 acre-feet of water. This system serves, for domestic and stock purposes, an area of 40,000 acres, constituted the "Kerang North-West Lakes Waterworks District." The lakes are filled by gravitation from the Torrumbarry Weir, on the River Murray, via the Kow Swamp Irrigation Works. The water is diverted along Sheepwash Creek—an improved natural effluent from the Loddon—the river level having been raised by a concrete weir at Kerang. As in the Coliban District, limited quantities of water are sold on application for irrigation purposes, about 5,500 acres having been irrigated annually from this source for some years. These irrigation facilities have been so appreciated that, in response to a strong demand, an Irrigation District of 18,000 acres ("Mystic Park") has been constituted on the west of the Lakes, and works are in course of construction to provide an irrigation supply to some 13,000 acres lying to the north of "Third Lake." This area is also being constituted an Irrigation District.

(h) *The Broken River Works* comprise two weirs—"Casey's" and "Gowangardie"—above Shepparton, and offtake works therefrom, for the diversion of water into the channels of the Tungamah, Shepparton, and Numurkah Waterworks Trusts.

(i) *The Wonthaggi Works* comprise a storage reservoir on Lance Creek, capacity 421,000,000 gallons, a main pipe line therefrom 9 miles in length to the coal-mining town of Wonthaggi, a service reservoir—capacity 1,400,000 gallons, and 18 miles of pipe reticulation for the service of that town. The population supplied is 5,000, in addition to the State Coal Mine and Railways Department.

(iv) *Flood Protection.* The Water Acts of Victoria provide for the constitution of Flood Protection Districts, in which the residents are rated for schemes carried out for their benefit. The works are constructed, and districts administered by the State Rivers and Water Supply Commission, and the Commission is carrying out extensive schemes at Koo-wee-rup and Cardinia, in the south-eastern portion of the State, at Loch Garry and Kanyapella on the Goulburn River between Shepparton and Echuca, and works on a smaller scale at the town of Echuca.

The Koo-wee-rup and Cardinia Flood Protection Districts together embrace the whole of a large continuous depression south of the main Gippsland railway and along the sea-board of Westernport, containing in all about 100,000 acres of very fertile country, the proper development of which was seriously retarded by periodical inundations. A large portion of the land was reclaimed, subdivided, and settled by the State, but it became evident, during periods of heavy rainfall, that only a comprehensive drainage scheme for the whole area affected would afford the needed protection from flooding.

At the request of the settlers, the Commission prepared schemes for this purpose, and, after the concurrence of the settlers had been obtained, practically carried the schemes into effect; and the two large districts above-mentioned were constituted, and are now being rated on an acreage basis in respect of benefits derived from the works. The Commission's works are now well advanced, and provide flood protection from all but abnormal floods. They consist of the substantial enlargement and remodelling of most of the existing principal drains, the construction of new internal drains, and the cutting of several distinct outlets, thus avoiding concentration of flood waters in the main drains.

The Loch Garry Flood Protection Works comprise about $5\frac{1}{2}$ miles of earthen levee banks around Loch Garry, and a concrete regulator and spillway 400 feet in length, to control overflows from the Loch. The purpose of the scheme is to protect some 40,000 acres of lands previously flooded by overflows of the Goulburn River by way of Loch Garry and Bunbartha Creek. The Kanyapella Scheme provides for the conservation of a domestic and stock supply in Warrigal Creek, and the exclusion therefrom of certain flood waters. The area benefited will be 13,500 acres. Both schemes have been approved of by a majority of the land holders concerned.

(v) *Mildura*. The Mildura Irrigation Scheme is controlled by the First Mildura Irrigation Trust, and water is obtained by pumping from the River Murray. The area of the settlement is 45,000 acres, of which 13,000 acres are under intense culture, vines predominating. During the year ending 30th June, 1924, the Trust's receipts aggregated £43,350, and its expenditure £49,903, whilst loans—exclusive of £6,991, arrears of interest—advanced by the Government amounted at 30th June, 1924, to £95,582. The number of water-acres supplied during the year was 42,854.

4. Queensland.—The main irrigation works in Queensland are as follows :—

(i) *Dawson Valley Scheme*. The Dawson Valley Irrigation Scheme, now under construction, comprises :—(a) A concrete dam at Nathan's Gorge, some 30 miles below the town of Taroom, to impound 2,500,000 acre-feet of water. (b) An offtake weir 27 miles down stream for the diversion of water for the irrigation of 200,000 acres in the Dawson Valley.

The Dawson River rises in the Great Dividing Range. The catchment above the proposed Nathan Dam is 9,000 square miles, over which the average annual rainfall is 27 inches.

An arched dam is involved, with termini on lines tangential to the curve. The rock forming the foundations is a hard sandstone, the crushing strength of which ranges from 3,000 to 5,000 lb. per square inch. It is designed to fix the water level 130 feet above summer water level at the site, and the crest height at 140 feet, with a spillway on the right bank. The crest length of the dam will be 860 feet, 500 feet on the curved portion. The reservoir will be the largest artificial storage in the world.

The main canal is being given a fall of 1 foot per mile, and water for irrigation purposes can be diverted from it shortly after leaving the regulating weir. A model garden town has been laid out on the banks of the river.

The irrigable lands are of a good agricultural type, suitable for irrigation, with good capillarity, ample humus, and containing liberal amounts of all mineral plant foods in readily available form. About 120,000 acres are commanded on the eastern side of the river, and 80,000 on the western side. A hydro-electric station will utilize the water power to irrigate 50,000 acres of high level lands situated above the river flats, and not commanded by gravitation.

The Dawson Valley Works are situated in the central division of the State. The area of this division is 209,340 square miles, and the population, as derived from the 1921 census, 88,945. Since then, agriculture has increased on account of cotton cultivation proving successful, and a considerable portion of the State's crop now comes from the Dawson Valley.

A railway line is in course of construction through the irrigation areas from the present terminus of the Dawson Valley Line at Baralaba.

Although the work on the main dam at Nathan Gorge has not yet progressed beyond the initial stages, and the construction of the offtake weir and regulator at Delusion Creek has not yet commenced, it is anticipated that some 5,000 acres of the first (or Castle Creek) section will be thrown open for settlement in 1925, as a result of the erection on the river bank of a temporary pumping plant consisting of a 400 h.p. triple expansion engine, and a double drum B. and W. boiler operating two 16-in. centrifugal pumps, capable of pumping 9,000 gallons of water per minute. The main and subsidiary canals, together with the necessary drainage channels of this section were completed in December, 1924.

In order to minimize heavy interest charges accruing during the process of construction the project has been designed on the zone system, by which one area is prepared for settlement and completed before the next zone is proceeded with. Five zones have been designed, each averaging 40,000 acres of irrigated land attached to a similar acreage of dry lands. The dry lands, however, are only attachable to the outer ring of farms, and will be allotted in the proportion of 10 acres of dry land to 1 acre of irrigated land. These outer lands are intended for dairying, lamb-raising and similar pursuits, and the areas will be divided into blocks comprising from 30 to 40 acres of irrigated land and 300 to 400 acres of dry lands, both contiguous. The farms grow smaller as the centre of the zone is approached, till the unit of $12\frac{1}{2}$ acres is the standard immediately adjacent to each central town. Though forming an integral part of the gravitation system, each zone will be a separate entity, served by its own central township, and in close connexion with the Dawson Valley railway system now under construction.

(ii) *Inkerman Irrigation Area.* This area is situated at Home Hill, Ayr district, using the waters of the Burdekin River, with electrically operated shallow well pumps. The number of wells and pumps is 230, and the acreage under irrigation at the end of 1924 was 5,000. Provision is being made to increase this area to 10,000 acres.

(iii) *Other Schemes.* Smaller schemes include Townsville (wells, creek, and river); Rockhampton (wells, river, creek, &c.); those at Bingera, near Bundaberg, which utilize water pumped from the Burnett River just above the point of meeting of the salt and fresh waters; and those at Fairymead, which utilize water pumped from a number of shallow spear wells sunk on the alluvial flats on the north side of the Burnett River and about 6 miles from Bundaberg.

5. *South Australia.*—(1) *The Renmark Irrigation Trust.*—The Renmark Irrigation Trust was established on similar lines to Mildura, but on a smaller scale. The area of settlement is 30,000 acres, and the irrigated area 7,780 acres. The population of the town and settlement is 4,800. Water is obtained from the Murray by pumping. The main pump situated on the river bank lifts the water into a large lagoon, from which three further pumps of 17 feet, 26 feet, and 27 feet-lift raise the water and irrigate 950, 4,200, and 1,880 acres respectively. A fifth pumping plant again lifts the water 26 feet and irrigates 750 acres. The total length of the channels is 78 miles and of roads 98 miles, while the annual water rate is £2 15s. 0d. per acre. It is anticipated that when Murray locks 4 and 5 are completed, it will be possible to gravitate the water into the lagoon, and plans are on foot for the establishment of a central power station and the gradual electrification of all the pumping plants. Cultivation on the settlement is as follows: Sultanas, 2,441 acres; currants, 1,335 acres; gordos, 922 acres; doradillos and wine grapes, 404 acres; pears, 155 acres; apples, 8 acres; apricots, 292 acres; peaches and nectarines, 109 acres; citrus fruits, 438 acres; figs, 11 acres; prunes, 7 acres; olives, 39 acres; miscellaneous fruits, 16 acres; and balance in fodder crops. The approximate production for 1924 was as follows:—4,150 tons of dried fruit, and 4,200 tons of grapes, which were supplied to the distilleries. In addition, several hundred tons of fresh pears were sent to canning factories in Adelaide, and 15,000 cases of oranges were packed. The most

up-to-date and largest fruit-packing shed in the State is situated at Renmark, and is co-operatively owned, as is also a large distillery for the manufacture of grape spirit. There are several private packing sheds and a private distillery.

(ii) *Other Waterworks.* A number of country water works are under the control of the Public Works Department. As, however, they are not irrigation works properly so called, but are used for supplying water for domestic purposes, etc., to several towns, no further reference will be made to them in this chapter. (See chapter on Local Government.)

(iii) *Areas under Irrigation.* The Irrigation Areas on the River Murray above Morgan under Government control up to the end of February, 1925, contained 18,185 acres of irrigable land, allotted to 1,137 settlers, including 617 returned soldiers, and 11,792 acres ready for allotment. The pumping plants at present installed or being installed on these areas aggregate 7,653 brake horse-power, with a pumping capacity of over 12 million gallons per hour.

The *Cadell Irrigation Area* is 7 miles by river above Morgan, and comprises 2,727 acres, of which 1,185 are irrigable. Blocks have been allotted to 76 soldier settlers and 4 civilian settlers, and the balance is ready for allotment in 5 blocks. The area is suitable for fruit-growing. The pumping plant is a 190 b.h.p. steam plant, with a capacity of 4,200 gallons per minute against a head of 75 feet. This area was first allotted on 30th September, 1919.

The *Waikerie Irrigation Area* is 39 miles above Morgan by river, and includes the old Waikerie and Ramco settlements. The total area is 9,300 acres, of which 3,103 acres are first class irrigable land, growing fruit trees and vines. The area allotted is divided between 159 settlers, the first allotment taking place on 5th July, 1910. The pumping plant consists of five units, four suction gas and one steam unit, with a total of 1,300 b.h.p. The capacity of the plant is 17,000 gallons per minute against a total head of 140 feet.

The *Holder Irrigation Area* adjoins the Waikerie Irrigation Area, and has been incorporated as a portion of the latter. It contains 471 acres of irrigable land, and 1,890 acres of dry land. Blocks have been allotted to 21 settlers, including 13 soldier settlers. An area of 115 acres of the irrigable land has been subdivided into 42 small allotments, of which 37 have been allotted. The pumping plant consists of two steam units, with a total of 238 b.h.p., and a capacity of 3,750 gallons per minute against a total head of 115 feet. An adjoining irrigable area of 110 acres, held by Holder Ltd., is also irrigated by this plant.

The *Kingston Irrigation Area* is situated 75 miles above Morgan by river, and comprises the old village settlement of that name. It has a total area of 3,748 acres, of which 483 acres are irrigable. This area was allotted to 30 settlers in July, 1914, and is used for fruit and vine culture. The water is pumped by a 130 b.h.p. steam plant with a capacity of 2,000 gallons per minute against a total head of 114 feet.

The *Moorook Irrigation Area*, adjoining the Kingston Area, contains 5,970 acres of land, of which 1,045 acres can be watered from the main channels. Altogether 876 acres of irrigable land have been allotted to 50 settlers, of whom 25 are soldier settlers. The first allotment took place in March, 1916. This area is irrigated by a 430 b.h.p. steam plant of two units, with a capacity of 7,160 gallons per minute against a total head of 120 feet.

The *Cobdogla Irrigation Area* is on the opposite side of the river to Kingston and Moorook Areas. It was formerly a sheep station held under pastoral lease, and was resumed by the Government for irrigation purposes. The total area of the station was 160,000 acres, of which 23,400 acres had been set apart as the Berri Area, and the remaining 136,600 acres as the Cobdogla Area. The latter area includes Lake Bonney, 4,000 acres in extent. This lake is situated 3 miles inland from the Murray, and is filled at high rivers by Chambers Creek, a winding waterway. The water is retained in the lake by a weir with movable shutters, erected at the junction of the lake and creek.

The Cobdogla Area contains about 30,000 acres of first class land capable of intense culture. It is divided into 5 divisions, viz., the Cobdogla, Nookamka, Loveday, McIntosh, and Weigall divisions.

The Cobdogla division has been developed as a low-lift area, the pumping head being about 34 feet, to irrigate 1,824 acres of land, suitable for vine and fodder growing. An area of 624 acres has been allotted to 21 settlers.

The Nookamka division, south of Lake Bonney, has an irrigable area of 2,599 acres, of which 1,950 acres have been allotted to 124 soldier and 8 civilian settlers, and the balance of the area is being made available for allotment. The first allotment took place on 16th March, 1922.

The Loveday division has an irrigable area of 9,324 acres, divided into 579 blocks. The construction work on this area has been completed, and 44 blocks have been allotted to soldier settlers. The reticulation is by means of concrete pipe lines, for both main and branches, instead of open channels.

Pumping plants have been installed on the Cobdogla, Nookamka, and Loveday divisions. On the Cobdogla division a 240 b.h.p. steam plant with a capacity of 16,700 gallons per minute has been installed. Two "Humphrey" gas pumps are in course of installation with a combined capacity of 47,600 gallons per minute. These pumps were to be tested in 1925. The Nookamka division has two steam units, totalling 640 b.h.p., with a capacity of 12,500 gallons per minute. The Loveday division has a 300 b.h.p. plant, with a capacity of 6,000 gallons per minute; two other units are being installed of 1,315 b.h.p., with a total pumping power of 39,300 gallons per minute.

The *Berri Irrigation Area* is 120 miles above Morgan by river, and contains a total area of 23,400 acres, of which 8,100 acres is suitable for fruit and vine culture. A total of 7,946 acres of irrigable land has been allotted to 481 settlers, of whom 270 are soldier settlers. An area of 80 acres of the irrigable land is used as an experimental farm. The first allotment of the older portion of this area took place in January, 1911. The pumping plant consists of five units, three suction gas and two steam units, with a total of 2,250 b.h.p., and a capacity of 42,500 gallons per minute against total heads varying from 50 feet to 120 feet.

The *Chaffey Irrigation Area* comprises a large area of country adjacent to Renmark. Preliminary survey work has been carried out over 14,000 acres of prospective irrigable land. A portion of this area, known as the Rae Rae Division, containing 1,711 acres, has been subdivided into 122 blocks, 70 of which have been allotted to 64 settlers, 57 being soldier settlers. A pumping plant of 220 b.h.p., with a capacity of 12,500 gallons per minute against a total head of 30 feet has been installed.

The *Irrigation and Reclaimed Swamp Areas* under Government control on the River Murray below Morgan contain 12,864 acres, i.e., 2,166 acres of high irrigable and 10,698 acres of reclaimed swamp land, allotted to 231 settlers, of whom 66 are soldier settlers. The former land is irrigable by pumping, and the latter by gravitation. Pumping plants installed total 1,546 b.h.p., with a capacity of $4\frac{1}{2}$ million gallons per hour.

The *Mobilong and Burdett Areas* adjoin Murray Bridge, and contain 586 acres of reclaimed fodder land with 46 settlers.

The *Long Flat and Monteith Flat* below Murray Bridge have between them a reclaimed area of 1,342 acres, divided between 50 settlers.

The *Swanport Area* below Murray Bridge has 192 acres of fruit and fodder land.

The *Jervois Irrigation Area* now in course of construction, is divided into three divisions, i.e.—

The *Jervois Division* is 15 miles below Murray Bridge, and includes 1,083 acres of reclaimed land, which will accommodate 30 settlers when completed.

The *Woods Point Division* is 12 miles below Murray Bridge, and contains in its total area of 3,726 acres about 1,104 acres of reclaimed land. The area will accommodate 33 settlers.

The *Wellington Division* is 18 miles below Murray Bridge, and has an area of over 12,000 acres; of this area about 1,627 acres are reclaimed land. Provision is being made for 45 settlers.

The two first-mentioned divisions will shortly be available for allotment.

The *Mypolonga Area* is 9 miles above Murray Bridge, and has a river frontage of 7 miles. The total area of this settlement is 5,800 acres, of which 1,036 are irrigable, and 1,622 acres reclaimed land. The area has 90 settlers.

The *Pompoola Area* is situated 13 miles above Murray Bridge, and was previously used as a Training Farm for prospective soldier settlers. The area contains 4,127 acres, of which 186 acres are fruit and 476 acres fodder land. Blocks have been allotted to 16 soldier settlers, and a further settler can be accommodated.

The *Wall Area*, 16 miles above Murray Bridge, has 768 acres of irrigable and reclaimed land. Twelve soldier settlers are settled on the area.

The *Neeta and Cowirra Irrigation Areas* are 20 miles above Murray Bridge, and include 422 acres of high irrigable land, and 1,620 acres of reclaimed fodder land. These areas are ready for allotment. At present 15 settlers have been placed on the blocks.

The *Baseby Area* is about 21 miles above Murray Bridge, and has an area of 1,350 acres, of which 528 acres are in course of reclamation.

The reclaimed lands consist mainly of peaty soils composed of rich river silt, and are eminently suitable for the growth of lucerne and other fodders, onions, potatoes, etc. The soils of the irrigable lands have already proved their suitability for the production of peaches, apricots, nectarines, oranges, lemons, figs, and grapes.

(iv) *Allotment of Irrigated Land.* All lands are allotted under perpetual lease, and blocks are surveyed into areas varying up to 50 acres of irrigable or reclaimed land. No lessee is permitted to hold more than 50 acres of irrigable or reclaimed land, or of both irrigable and reclaimed, except that in the case of a partnership 50 acres may be allotted for each member of the partnership up to a maximum of 150 acres.

In addition, areas of non-irrigable land are allotted to lessees of irrigation and reclaimed blocks for dry farming. The rentals of the blocks are fixed by the Irrigation Commission immediately prior to the land being offered for application. For the reclaimed land an amount is charged sufficient to cover interest on cost of the land, the survey thereof, and interest on cost of the levee; while for the irrigable land the rent is based on the unimproved value of Crown lands, or to cover interest on cost of repurchased lands.

On the irrigable land, the present rate is 60s. per acre per annum. On the reclaimed lands an amount is charged to meet the annual management, drainage, maintenance expenses, and certain interest charges, the present rate being 30s. per acre. A sliding scale covers the rent on all land and water rates on the irrigable land for the first four years, i.e., first year, one-quarter of the rent and water rates; second year, one-half; third, three-quarters; fourth and afterwards, full amount, per acre. On the irrigable lands, each lessee is entitled for the water rates to 24 acre-inches per annum, supplied in four irrigations; special irrigations and domestic supplies are available at times other than during the general irrigation at a nominal cost. On the reclaimed lands, water is supplied regularly by reticulation from the river.

Liberal assistance is provided by the Government to lessees of irrigation blocks. Apart from the erection of pumping plants, construction of main channels and other work necessary to render the land ready for occupation, the Irrigation Commission has power to carry out improvements in the nature of clearing, channelling, fencing, etc. The lessee on allotment is required to take over any expenditure so incurred, and to pay an amount of not less than 15 per cent. of the cost of the work. Subsequent to allotment the Commission has power to expend a sum not exceeding £30 per acre of the irrigable land in any lessee's block in making the following improvements, or any of them:—Fencing, clearing, grading, constructing irrigation channels, drains and tanks thereon, and connecting such channels or drain with the nearest main channel or drain. The lessee is required

to pay a deposit before the work is commenced equal to not less than 15 per cent. of the Commission's estimate of the cost of carrying out such improvements. The Commission may also make cash advances to any lessee for all or any of the following purposes :—

- (a) For carrying out improvements and the erection of buildings to the extent of the estimated value of the lease and improvements already made or in course of being made thereon, but not exceeding £650.
- (b) For the purchase of implements, stock, seeds, plants, trees, etc., to any amount not exceeding £200.
- (c) For any other purpose that may be approved by the Commission, but not exceeding three-fourths of the estimated value of the lease and any improvements already made thereon.

The total amount that may be expended or advanced, however, for all or any of the above purposes, including improvements carried out by the Commission, shall not exceed in aggregate the sum of £600, or £30 per acre of the irrigable portion of the land, whichever sum is the greater.

All expenditure incurred by the Commission in improving the land either before or after allotment, or advanced to the lessee to carry out further improvements, must be repaid under the following conditions :—For the period of 5 years following the date on which the expenditure was incurred or advances made, the lessee shall pay interest on the amount at current rates. After the expiration of 5 years, the lessee is required to repay the amount expended or advanced by 70 equal half-yearly instalments, together with interest at current rates on the balance remaining unpaid.

6. *Western Australia.*—In this State an Irrigation Act provides for the constitution of irrigation districts. At Harvey, works for irrigating about 4,000 acres devoted to fruit growing, principally oranges, were opened on the 21st June, 1916. A scheme is now in preparation for irrigating a further area in the same district.

Numerous small private irrigation schemes are in full operation on many of the south-west rivers, in connexion with fruit, fodder, and potato growing.

7. *Murray Waters.*—(i) *River Murray Agreement.* The River Murray Agreement, entered into by the Governments of the Commonwealth and the States of New South Wales, Victoria, and South Australia in 1914, and which was brought into operation by proclamation on 31st January, 1917, provides for the construction of the following works :—

The Hume Reservoir,
The Lake Victoria Storage,
26 Weirs and Locks in the River Murray between Echuca and Blanchetown, and
9 Weirs and Locks in the River Murrumbidgee, or, alternatively, at the discretion of the Government of New South Wales, in the River Darling.
(The Government of New South Wales decided in favour of the construction of these weirs and locks in the River Murrumbidgee.)

The Agreement provides that the construction of these works shall be undertaken by the Governments of the three States—the Hume Reservoir and 17 weirs and locks between Echuca and Wentworth, including that at Wentworth, to be constructed by the Governments of New South Wales and Victoria severally or jointly, as may be mutually agreed upon by them; the 9 weirs and locks in the River Murrumbidgee to be constructed by the Government of New South Wales; and the Lake Victoria Storage and 9 weirs and locks in the River Murray below Wentworth by the Government of South Australia.

The River Murray Commission, appointed in pursuance of the Agreement referred to, and comprising a representative of each of the four contracting Governments, is charged with the duty of giving effect to the Agreement and the River Murray Waters Acts.

The Agreement directs that the Governments of the three States shall submit to the Commission a general scheme of the works to be undertaken by them respectively; and further, that before the commencement of any particular work, designs and estimates in relation thereto shall be forwarded to the Commission for approval by that body.

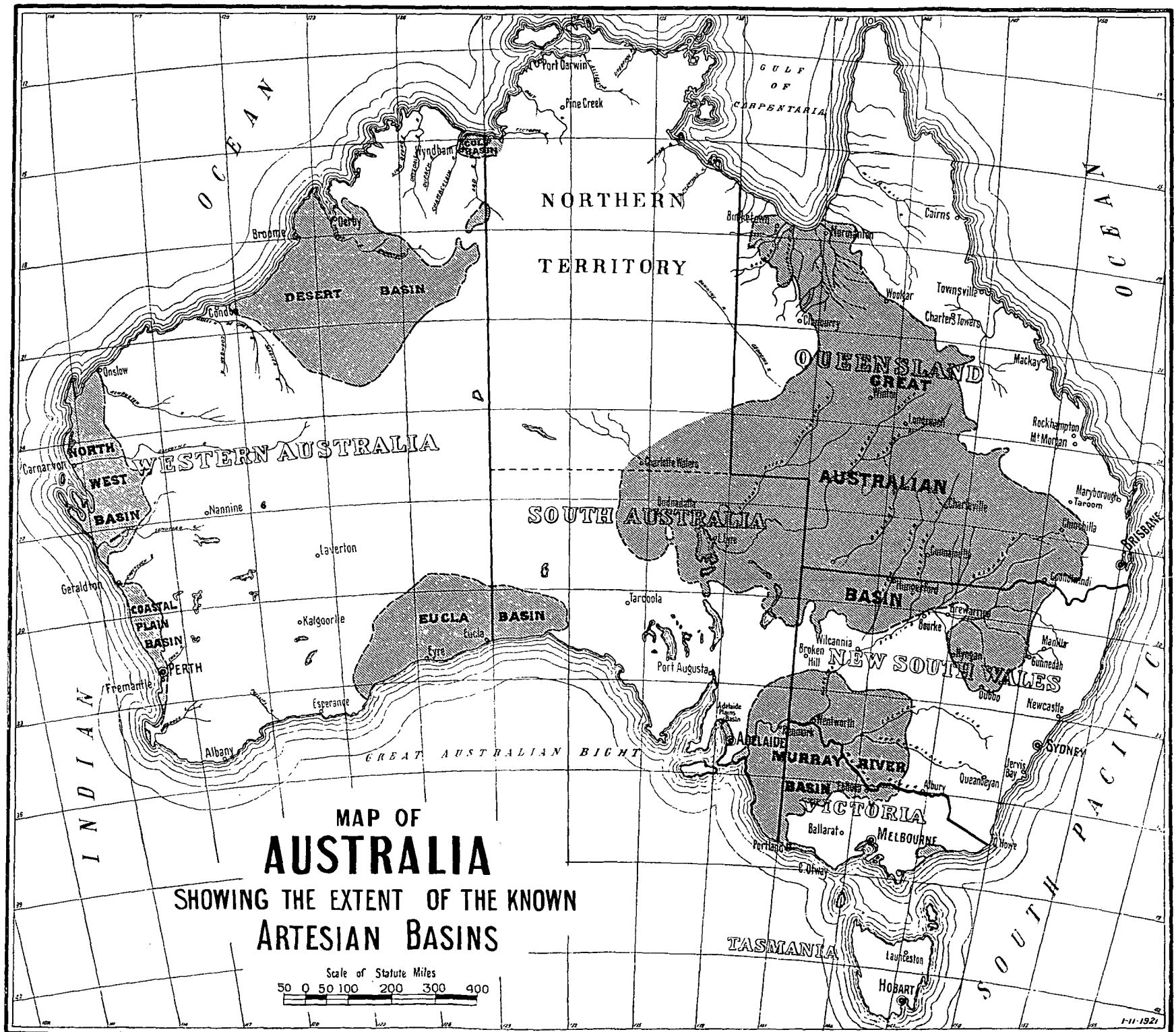
(ii) *Amendment of the Agreement.* As a result of proposals placed before the Conferences of Premiers which met on 25th May and 20th July, 1920, and the discussions which took place thereon, an agreement, providing for the amendment of the River Murray Agreement of 1914, was entered into by the four contracting Governments on 23rd November, 1920. In the Agreement as so amended it was proposed that the construction of all works covered by the River Murray Scheme should be placed under the control of the River Murray Commission in lieu of the three Constructing Authorities as provided for in the Agreement of 1914. It was also provided that the four Contracting Governments should contribute towards the cost of the scheme in equal shares, and that all plant required for the construction of works should be purchased by the Commission from funds provided by the four Contracting Governments. The Parliaments of the Commonwealth and the States of Victoria and South Australia passed legislation giving effect to the amendments proposed. As the Parliament of New South Wales did not, however, pass the Agreement in the terms approved by the four Contracting Governments, the amending Agreement in question was not ratified.

Following upon a Conference of Ministers representing the four Contracting Governments, which assembled in May, 1923, an agreement was entered into by the four Governments providing for the variation of the 1914 Agreement, as follows:—

- (1) The Weir and Lock at Wentworth, one of the 17 weirs and locks set down in the 1914 Agreement for construction between Echuca and Wentworth, to be constructed by the Governments of New South Wales and Victoria at a site below the junction of the Rivers Murray and Darling.
- (2) The construction of works which will provide for the needs of irrigation to have precedence over the construction of any works which will be primarily for the requirements of navigation.
- (3) All tolls collected at the various weirs and locks to be distributed in equal proportions among the three Contracting States.
- (4) The period of seven years referred to in Clause 44 of the Agreement relating to the distribution of waters following upon the completion of the Upper Murray Storage to be extended to twelve years; the amount of water to be allowed to pass for supply to South Australia in the meantime to be determined by a three-fourths majority of the River Murray Commission.
- (5) The Commonwealth Government's contribution towards the cost of the works covered by the River Murray Agreement to be increased from £1,000,000 to a quarter share, upon the understanding that it is the intention to carry out the original agreement subject to any modifications thereof as are at any time mutually agreed upon by all the Contracting Governments.

This amending Agreement was subsequently ratified by the four Parliaments concerned, and came into operation as from the 16th November, 1924.

(iii) *Works.*—(a) *General.* The whole of the works which have been put in hand to date, with the exception of the weir and lock at Blanchetown, which were commenced before the Agreement came into operation, and which were in that Agreement specifically exempted from the provisions thereof, have been constructed, or are being constructed, in accordance with designs approved by the River Murray Commission.



This map was included in the Report of the Third Interstate Conference on Artesian Water held in Adelaide during September, 1921. It contains the latest available information regarding the extent of the artesian basins. See also letterpress on page 886

The following are the works which have been put in hand :—

The Hume Reservoir,	By the Governments of New South Wales and Victoria.
Weir and Lock at Torrumbarry (near Echuca),	
Weir and Lock No. 11 (Mildura),	
Weir and Lock No. 10 (Wentworth), a little below the junction of the Rivers Murray and Darling,	By the Government of South Australia.
The Lake Victoria Storage,	
Weirs and Locks Nos. 1, 2, 3, 5, 9,	

Of the above works one weir and lock No. 1 have been finally completed, and two weirs and locks, viz., Torrumbarry (Victoria) and No. 3 (South Australia) have been completed with the exception of minor details. Each of these three works has been brought into operation.

(b) *The Hume Reservoir.* The site of the Hume Dam, which is being constructed jointly by the Constructing Authorities for New South Wales and Victoria, is located a little below the junction of the Rivers Murray and Mitta Mitta, where the reservoir will receive the run-off from a catchment of 6,000 square miles of mountainous country.

The original designs prepared in connexion with this work provided for a reservoir with a capacity of 1,100,000 acre-feet, and the work was put in hand on both sites of the river in accordance with such designs.

The question of the advisability of utilizing the Hume Reservoir works for the purpose of hydro-electric generation having been placed before the four Contracting Governments, a Conference of Engineers representative of each of those Governments was convened to investigate the matter, and also to inquire into and report upon the question as to whether the reservoir could with advantage be enlarged.

The following estimates of cost of reservoirs of different capacities, including provision for special outlets for power, were furnished to the Conference :—

Capacity in Acre-feet.	Estimate of Cost.
1,100,000	£2,577,000
1,400,000	2,856,000
1,500,000	3,000,000
1,700,000	3,225,000
2,000,000	3,486,000

The report and recommendations of the Conference referred to were subsequently considered by a Conference of Ministers representing the four Governments, the result of which Conference was the adoption of the following resolutions :—

- (1) That this Conference is of opinion that provision should be made for outlet works at the Hume Reservoir suitable for the purpose of hydro-electric generation in addition to the purposes set out in the River Murray Agreement, provided that the use of the reservoir for such generation of power will not in any way interfere with the output therefrom of the volumes of water required for the purposes set out in the River Murray Agreement.
- (2) That the cost of such additional works, estimated at £40,000, should be borne in equal shares by the Governments of New South Wales and Victoria, which Governments should have the sole use of any power generated at the reservoir.
- (3) That the Commonwealth Government be requested to give a formal assurance that no claim will be made under clause 10 of the first schedule of the *Seat of Government Surrender Act of 1909* to any electricity that may be developed at the Hume Reservoir in connexion with the proposed works or any other works which may be established there.
- (4) That the work of construction of the Hume Dam, of sufficient dimensions to provide for a reservoir of 2,000,000 acre-feet, proceed for a period not exceeding three years, and that the question of the ultimate capacity and completion of the reservoir be then the subject of a further conference of Ministers representing the four Contracting Governments; provided that if the reservoir be increased above the capacity of 1,100,000 acre-feet it be understood that the additional water shall be used for meeting the present allocation obligations under the River Murray Agreement and as a reserve for dry years, such reserve to be used at the discretion of the River Murray Commission.

These resolutions having been concurred in by the four Contracting Governments, amended designs were prepared by the Constructing Authorities for New South Wales and Victoria, providing for a storage of 2,000,000 acre-feet capacity. These designs were approved by the River Murray Commission, and the work is now proceeding in accordance therewith pending further consideration by the four Contracting Governments before the 9th August, 1927, the date of completion of the three-year period referred to in resolution 4 above quoted, of the question of the ultimate capacity of the reservoir. During the period of three years referred, to the dam will not be carried higher than the level necessary for a reservoir of 1,100,000 acre-feet.

Pending finality regarding the ultimate capacity of the reservoir, the following estimate of cost of a reservoir of 1,100,000 acre-feet has been approved:—

Estimated cost of a reservoir of 1,100,000 acre-feet capacity ..	£2,547,000
Estimated cost of special outlet works for power	40,700
Approximate cost of additional works necessary to permit of the capacity of the reservoir being increased at a later date to 2,000,000 acre-feet, if so agreed upon by the four Contracting Governments	350,000
Total	<u>£2,937,700</u>

The dam, which is in course of construction, will consist of two main sections—(1) the outlets and flood spillway, and (2) the earthen embankment containing a concrete core wall sunk into the solid granite, and provided with a tunnel for drainage and inspection purposes. The first section, which will extend from the New South Wales bank of the river to the Victorian bank, and which will be practically all of concrete, is being constructed by the New South Wales Constructing Authority. The remaining section of the dam, which extends from the Victorian bank of the river to the high ground bordering the river flats, is in course of construction by the Victorian Constructing Authority.

The total length of the dam, including both sections above referred to, will be 4,200 feet.

(c) *Lake Victoria Storage.*—The Lake Victoria Storage is situated in the south-west corner of the State of New South Wales. The scheme approved consists of the construction of extensive embankments and channels, the construction of three regulators, the inlet regulator in the Frenchman's Creek, the controlling regulator in the main inlet channel, and the outlet regulator in the Rufus River—and improvements to Frenchman's Creek and Rufus River.

These works, which are now practically completed, will enable the storage in the Lake of 514,000 acre-feet of water for use by the State of South Australia.

(iv) *Finance.* In the River Murray Agreement of 1914, the estimated total cost of the whole of the works was set down at £4,663,000, and it was provided that the four Contracting Governments contribute towards such estimated expenditure in the following proportions, viz. :—

Commonwealth	£1,000,000
New South Wales	1,221,000
Victoria	1,221,000
South Australia	1,221,000
	<u>£4,663,000</u>

It is now clear, from the experience which has been gained in connexion with the works which have been put in hand to date, that the total cost of the whole of the works will be considerably in excess of the estimate referred to. The total expenditure incurred up to 31st March 1925, on that portion of the scheme completed and in course of construction amounted to £3,326,500, towards which expenditure the four Contracting Governments, in conformity with the amending Agreement previously referred to, have contributed in equal shares.

The Commission's estimate of expenditure during the current year, forwarded to the four Contracting Governments in accordance with the requirements of Clause 34 of the River Murray Agreement, was £985,000. The total expenditure incurred during the first half of the year amounted to £406,000.

The Commission's estimate of expenditure in respect of the year 1925-26 is as follows:—

New South Wales—

Hume Reservoir	£300,000
Weir and Lock No. 10 (Wentworth) ..	90,000
Surveys and Borings	10,000
	<hr/> £400,000

Victoria—

Hume Reservoir	160,000
Weir and Lock No. 11 (Mildura) ..	110,000
Torrumbarry Weir and Lock	500
Surveys, Investigations, and Supplies of Materials for other Weirs and Locks	29,500
	<hr/> 300,000

South Australia—

Weir and Lock No. 2	100,000
Weir and Lock No. 4	20,000
Weir and Lock No. 5	90,000
Weir and Lock No. 9	35,000
Lake Victoria Works	30,000
	<hr/> 275,000
	<hr/> £975,000

(v) *Gaugings.* The River Murray Agreement places upon the Commission the duty of carrying on an effective and uniform system of making and recording continuous gaugings of the main stream of the River Murray and its tributaries within the boundaries of each of the States of New South Wales, Victoria, and South Australia, and of all diversions, whether natural or artificial or partly natural and partly artificial, from the main stream and its tributaries. It is further provided that, in lieu of making any such gaugings, the Commission may accept any gaugings made and recorded by any of the Contracting State Governments.

Arrangements have been made with the three Contracting State Governments for the adoption of uniform methods in connexion with all gaugings on the River Murray and its tributaries, and for the submission periodically to the Commission, for purposes of the River Murray Agreement, of the results of such gaugings.

The gaugings made at the Renmark Gauging Station during the year 1923-24 indicated that the total flow of the river at that point was 12,787,870 acre-feet during the year. The flow at the same station during the preceding year was 4,400,417 acre-feet, the average for all years being about 8,500,000 acre-feet.

The approximate quantities of water diverted from the river by the three States by artificial or partly artificial means during the same year were as follows:—

	Acre-feet.
New South Wales	800,587
Victoria	951,610
South Australia	70,577
	<hr/> 1,822,774

The River Murray Commission, as at present constituted, is as follows:—

Commonwealth—Hon. W. C. Hill, M.P., Minister for Works and Railways (President).

Deputy Commissioner—Mr. T. Hill, M.V.I.E.

New South Wales—Mr. H. H. Dare, M.E., M. Inst. C.E.

Victoria—Mr. J. S. Dethridge, M. Inst. C.E.

South Australia—Mr. J. H. O. Eaton, M. Inst. E., Aust.

Secretary—Mr. P. A. Gourgaud.

Accountant—Mr. H. J. Rowlands.

CHAPTER XXIV.

POPULATION.

§ 1. Enumerations and Estimates.

The nature of the early "musters" of the population and the subsequent Census enumerations which have been conducted in Australia were reviewed in Official Year Book, Number 15, pp. 1083-5. This review was accompanied by a tabular statement showing the dates on which the various enumerations were made, and the numbers counted on such occasions.

§ 2. Census of 4th April, 1921.

1. *Numbers Enumerated.*—The Census for the whole of Australia was taken as for the night between the 3rd and the 4th of April, 1921, and was the second Census under the provisions of the Commonwealth Census and Statistics Act 1905-20, which provides for the enumeration being dealt with from one centre, instead of each State being responsible for its own count as on previous occasions. The numbers recorded in the several States and Territories were as follows:—

POPULATION.—4th APRIL, 1921.

(EXCLUSIVE OF FULL-BLOOD ABORIGINALS.)

States and Territories.	Males.	Females.	Persons.
States—			
New South Wales	1,071,501	1,028,870	2,100,371
Victoria	754,724	776,556	1,531,280
Queensland	398,969	357,003	755,972
South Australia	248,267	246,893	495,160
Western Australia	177,278	155,454	332,732
Tasmania	107,743	106,037	213,780
Territories—			
Northern	2,821	1,046	3,867
Federal Capital	1,567	1,005	2,572
Australia	2,762,870	2,672,864	5,435,734

2. *Increase since Census of 1881.*—(i) *Australia.*—The increase of population between the Census of 3rd April, 1911, and that of 4th April, 1921, was 980,729, of which 449,835 were males and 530,894 were females, as compared with an increase of 681,204, comprising 335,107 males and 346,097 females, for the preceding ten years. The population of each sex enumerated at the Censuses of 3rd April, 1881, 5th April, 1891, 31st March, 1901, 3rd April, 1911, and 4th April, 1921, was as follows:—

POPULATION.—AUSTRALIA, LAST FIVE CENSUSES.

(EXCLUSIVE OF FULL-BLOOD ABORIGINALS.)

Date of Census.	Males.	Females.	Persons.	(a) Masculinity.
3rd April, 1881	1,214,913	1,035,281	2,250,194	7.98
5th April, 1891	1,704,039	1,470,353	3,174,392	7.36
31st March, 1901	1,977,928	1,795,873	3,773,801	4.83
3rd April, 1911	2,313,035	2,141,970	4,455,005	3.84
4th April, 1921	2,762,870	2,672,864	5,435,734	1.66

(a) Excess of males over females per 100 of population.

(ii) *States and Territories.* The increases in the population of the several States and Territories during the past four intercensal periods have been as follow :—

POPULATION.—STATES, ETC., INTERCENSAL INCREASES.

State or Territory.	1881-1891.		1891-1901.		1901-1911.		1911-1921.	
	Numerical.	Per cent.	Numerical.	Per cent.	Numerical.	Per cent.	Numerical.	Per cent.
N.S. Wales ..	(a) 374,129	49.90	(a) 230,892	20.54	(a) 298,602	21.67	453,637	27.55
Victoria ..	278,274	32.30	61,230	5.37	114,481	9.53	215,729	16.40
Queensland ..	180,193	84.39	104,411	26.52	107,684	21.62	150,159	24.79
South Australia ..	39,119	14.15	42,813	13.57	50,212	14.01	86,602	21.20
Western Australia ..	20,074	67.57	134,342	269.86	97,990	53.22	50,618	17.94
Tasmania ..	30,962	26.76	25,808	17.60	18,736	10.86	22,569	11.80
N. Territory ..	1,447	41.93	(b)-87	(b)-1.78	(b)-1,501	(b)-31.20	557	16.83
Fed. Cap. Ter. ..	..	..	..	..	..	..	858	50.06
Total ..	924,198	41.07	599,409	18.88	681,204	18.05	980,729	22.01

(a) Including Federal Capital Territory. (b) Decrease.

For Australia as a whole, the increase during the period 1911-1921 was greater by 299,525 than that for the period 1901-1911, the rate of increase being 22.01 per cent. for 1911-1921, as against 18.05 for 1901-1911. The former corresponds to an increase of 1.67 per cent. per annum, the latter to an increase of 2.01 per cent. per annum.

As regards the separate States, both the numerical and relative increases in the case of New South Wales, Victoria, Queensland, South Australia, and Tasmania were greater for 1911-1921 than for 1901-1911. On the other hand, Western Australia experienced a smaller increase during the decade 1911-1921 than in either of the two immediately preceding decades. The Northern Territory showed during the period 1911-1921 its first increase in population since the decade 1881-1891.

§ 3. Distribution and Fluctuation of Population.

1. *Present Number.*—The population of Australia on the 31st December, 1924, was estimated at 5,873,503 persons, of whom 2,996,848, or 51.02 per cent., were males, and 2,876,655, or 48.98 per cent., were females. The increase during the year 1924 was 123,696, equal to 2.15 per cent., males having increased by 66,546, or 2.27 per cent., and females by 57,150, or 2.03 per cent. Of the increase referred to, 79,947, or 64.63 per cent., was due to the excess of births over deaths, and 43,749, or 35.37 per cent., was due to the excess of immigration over emigration.

2. *Growth and Distribution.*—The following tables show the population of the States at decennial intervals from their foundation to the year 1910, and for each of the

last five years. In issues of the Year Book up to No. 15, the male and female population of Australia as a whole were given at quinquennial periods from 1788, but it is considered that the abridged table presented herewith will suffice for general purposes.

POPULATION.—1788 TO 1924.

Year.	Estimated Population at end of Year.							
	States.						Territories.	
	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Northern	Federal Capital.
								Australia.
MALES.								
(a) 1800	3,780	..	..	..	..	..	..	3,780
1810	7,585	..	..	..	..	..	..	7,585
1820	23,784	..	..	..	..	..	..	23,784
1830	33,900	..	..	..	877	(b) 18,108	..	52,885
1840	85,560	..	..	8,272	1,434	32,040	..	127,306
1850	154,976	..	..	35,902	3,576	44,229	..	238,683
1860	197,851	(b) 330,302	(b) 16,817	64,340	9,597	49,653	..	668,560
1870	272,121	397,230	69,221	94,894	15,511	53,517	..	902,404
1880	404,952	450,558	124,013	147,438	16,985	60,568	..	1,204,514
1890	602,704	595,519	223,252	166,049	28,354	78,453	..	1,692,831
1900	716,047	601,773	274,684	180,349	110,088	89,763	(c) 4,288	1,976,992
1910	858,181	646,482	325,513	206,557	157,971	98,866	2,738	2,296,308
1920	1,067,945	753,803	396,555	245,300	176,895	107,259	2,911	(b) 1,062
1921	1,084,399	764,905	404,907	252,144	178,500	110,026	2,718	1,128
1922	1,107,695	789,626	415,802	257,475	183,386	109,494	2,540	1,443
1923	1,127,195	806,546	428,312	265,340	199,429	109,546	2,527	1,407
1924	1,150,759	824,182	440,115	273,701	195,341	108,569	2,538	1,643
FEMALES.								
(a) 1800	1,437	..	..	..	..	..	..	1,437
1810	3,981	..	..	..	..	..	..	3,981
1820	9,759	..	..	..	..	..	..	9,759
1830	10,688	..	..	..	295	(b) 6,171	..	17,154
1840	41,908	..	..	6,358	877	13,959	..	63,102
1850	111,924	..	..	27,798	2,310	24,641	..	166,673
1860	150,695	(b) 207,932	(b) 11,239	61,242	5,749	40,168	..	477,025
1870	225,871	326,695	46,051	89,652	9,624	47,369	..	745,262
1880	336,190	408,047	87,027	128,955	12,576	54,222	..	1,027,017
1890	510,571	538,209	168,864	152,893	19,648	68,334	..	1,458,524
1900	644,258	594,440	219,163	176,901	69,879	83,137	(c) 569	1,788,347
1910	785,674	654,926	273,503	200,311	118,861	94,937	563	2,128,775
1920	1,023,777	774,106	354,069	245,706	154,428	105,493	1,078	(b) 910
1921	1,043,517	785,781	363,324	250,267	157,215	108,290	1,016	936
1922	1,065,237	801,599	372,488	255,719	160,222	109,430	1,011	1,114
1923	1,082,250	818,834	382,856	259,408	164,386	109,528	1,028	1,215
1924	1,103,691	832,913	394,779	264,805	168,783	109,270	1,059	1,355
PERSONS.								
1788	859	..	..	..	..	..	..	859
1790	2,056	..	..	..	..	..	..	2,056
1800	5,217	..	..	..	..	..	..	5,217
1810	11,566	..	..	..	..	..	..	11,566
1820	33,543	..	..	..	..	..	..	33,543
1830	44,588	..	..	..	1,172	(b) 24,279	..	70,039
1840	127,468	..	..	14,630	2,311	45,999	..	190,408
1850	266,900	..	..	63,700	5,886	68,870	..	405,356
1860	348,546	(b) 538,234	(b) 28,056	125,582	15,346	89,821	..	1,145,585
1870	497,992	723,925	115,272	184,546	25,135	100,886	..	1,547,756
1880	741,142	858,605	211,040	276,393	29,561	114,790	..	2,231,531
1890	1,113,275	1,133,728	392,116	318,947	48,502	141,787	..	3,151,355
1900	1,360,305	1,196,213	493,847	357,250	179,967	172,900	(c) 4,857	3,765,339
1910	1,643,855	1,301,408	599,016	406,868	276,832	193,803	3,301	4,425,083
1920	2,091,722	1,527,909	750,624	491,006	331,323	212,752	3,989	(b) 1,972
1921	2,127,916	1,550,686	768,231	502,411	335,715	218,316	3,734	2,064
1922	2,172,932	1,590,225	788,290	513,194	343,608	218,924	3,551	2,557
1923	2,209,445	1,625,380	811,168	524,748	353,815	219,074	3,555	2,622
1924	2,254,450	1,657,095	834,894	538,506	364,124	217,839	3,597	2,998

(a) Details as to sex not available for earlier decennial dates.

(b) Previously included with

New South Wales.

(c) Previously included with South Australia.

So far as the numbers can be ascertained, the nucleus of the population of Australia consisted of 1,204 persons, including the military, who landed in Sydney Cove on the 26th January, 1788. For many years the number increased very slowly, and in 1825, when Tasmania (then known as Van Diemen's Land) was separated from New South Wales and constituted a separate colony, i.e., 37 years after the first settlement, the total population was only 52,505 persons, of whom 38,313 were in New South Wales, and 14,192 were in Tasmania. The total for Australia attained its first million in 1858, 70 years after settlement. At this time the population was distributed among the States, or Colonies as they were then, as follows:—New South Wales, 31.97 per cent.; Victoria, 47.22 per cent.; Western Australia, 1.38 per cent.; South Australia, 11.29 per cent.; and Tasmania, 8.14 per cent. The second million was reached in 1877, after a lapse of nineteen years, by an average rate of increase of 3.53 per cent. per annum. The third million was reached twelve years later, in 1889, by an annual rate of increase of 3.48 per cent.; the fourth million sixteen years later, in 1905, at the rate of increase of 1.74 per cent. per annum; and the fifth million thirteen years later in 1918, by an annual average rate of 1.79 per cent. If the rate of increase which operated during 1924 be maintained, the sixth million should be reached before the end of 1925.

The growth of the population of Australia and of each State thereof, is illustrated by the graph accompanying this Chapter.

3. Increase at Decennial Periods since 1790.—The following table furnishes particulars relative to the increase in population of Australia during each decade, and the percentage of such increase on the population at the commencement of the decade:—

POPULATION.—AUSTRALIA, DECENNIAL INCREASE.

Decade ended 31st December—	Increase during Decade—					
	Numerical.			Percentage.		
	Males.	Females.	Persons.	Males.	Females.	Persons.
				%	%	%
1790	(a)	(a)	2,056	..	..	..
1800	(a)	(a)	3,161	(a)	(a)	153.75
1810	3,805	2,544	6,349	100.66	177.04	121.70
1820	16,199	5,778	21,977	213.57	145.14	190.01
1830	29,101	7,395	36,496	122.36	75.78	108.80
1840	74,421	45,948	120,369	140.72	267.86	171.86
1850	111,377	103,571	214,948	87.49	164.13	112.89
1860	429,877	310,352	740,229	180.10	186.20	182.61
1870	233,934	268,237	502,171	34.99	56.23	43.84
1880	302,020	281,755	583,775	33.47	37.81	35.43
1890	488,317	431,507	919,824	40.54	42.02	41.22
1900	284,161	329,823	613,984	16.79	22.61	19.48
1910	319,316	340,428	659,744	16.15	19.04	17.52
1920	455,422	530,792	986,214	19.83	24.93	22.29

(a) Not available.

4. Area, Population, Masculinity, and Density—States, 1924.—A previous table showed the estimated number of persons on the 31st December, 1924, in each of the States and Territories. In the following table the proportions of the total area, and of the total population represented by each State or Territory, are given, together with the masculinity and the density of population:—

AREA, POPULATION, MASCULINITY, AND DENSITY.—STATES, 1924.

State or Territory.	Percentage on Total Area.	Per cent. Estimated Population, 31st December, 1924.			Masculinity.(a)	Density. (b)
		Males.	Females.	Persons.		
New South Wales	10.40	38.23	38.31	38.27	2.09	7.29
Victoria	2.96	27.50	28.95	28.21	-0.53	18.86
Queensland	22.54	14.86	13.78	14.33	5.43	1.25
South Australia	12.78	9.13	9.21	9.17	1.65	1.42
Western Australia	32.81	6.52	5.87	6.20	7.29	0.37
Tasmania	0.88	3.62	3.80	3.71	-0.32	8.31
Northern Territory	17.60	0.09	0.03	0.06	41.12	0.007
Federal Capital Territory ..	0.03	0.05	0.05	0.05	9.61	3.19
Total	100.00	100.00	100.00	100.00	2.05	1.97

(a) Excess of males over females in each 100 persons.

(b) Number of persons per square mile.

NOTE—The minus sign (—) indicates excess of females over males in each 100 persons.

5. Urban and Rural Distribution.—The following table shows the number of persons and the percentage on the total population recorded at the Census of the 4th April, 1921, as resident in urban and rural areas respectively. The metropolitan divisions include the capital city and the adjoining urban areas; the urban provincial districts cover those cities and towns which are not adjacent to the metropolitan areas, and which are incorporated for local government purposes; those persons classed as migratory were mostly on board ships in Australian ports:—

URBAN AND RURAL POPULATION.—AUSTRALIA, CENSUS, 4th APRIL, 1921.

(EXCLUSIVE OF FULL-BLOOD ABORIGINALS.)

Particulars.	States.						Territories.		Australia.
	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Northern	Federal Capital.	
NUMBER.									
Urban—									
Metropolitan	899,059	786,465	209,946	255,375	154,873	52,361	..	..	2,338,079
Provincial ..	525,007	187,490	183,720	41,637	42,571	55,644	1,399	..	1,037,468
Rural ..	664,590	571,577	359,014	195,054	130,098	105,123	2,403	2,563	2,030,422
Migratory ..	11,715	5,748	3,292	3,094	5,190	652	65	9	29,765
Total ..	2,100,371	1,531,280	755,972	495,160	332,732	213,780	3,867	2,572	5,435,734
PERCENTAGE ON TOTAL.									
Urban—									
Metropolitan	42.80	50.05	27.77	51.57	46.55	24.49	..	..	43.01
Provincial ..	25.00	12.24	24.30	8.41	12.79	26.03	36.18	..	19.09
Rural ..	31.64	37.33	47.49	39.39	39.10	49.17	62.14	99.65	37.35
Migratory ..	0.56	0.38	0.44	0.63	1.56	0.31	1.68	0.35	0.55
Total ..	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

For Australia as a whole 62.10 per cent. of the population is urban, this percentage being exceeded by New South Wales, 67.80 per cent., and Victoria 62.29 per cent. Tasmania, with 50.52 per cent., has the smallest percentage of urban population in all the States.

During the ten years between the Censuses of 1911 and of 1921 the population of the metropolitan areas in the aggregate increased in proportion to the total population of Australia from 38.03 per cent. in 1911 to 43.01 per cent. in 1921. This movement was common to all the States, though in varying degree. The relative accretion to the metropolitan total was greatest in Western Australia, where it increased from 37.85 per cent. to 46.55 per cent. of the population of the State, and was least in New South Wales, where it increased from 38.23 per cent. to 42.80 per cent. The abnormal increase in the proportion of the metropolitan population to the total population of Western Australia is not due entirely to the actual increase to the population of Perth and suburbs, but is caused in some measure by the departure from the State of many persons who had been engaged in connexion with the mining industry in extra-metropolitan districts.

In Victoria and in South Australia more than half the population lives within the metropolitan areas. At the Census of 1921, 50.05 per cent. of the population of Victoria, and 51.57 per cent. of the population of South Australia, were resident in their respective capitals. Of the total population of Australia 43.01 per cent. was in the metropolitan areas; the proportion of the total males being 40.35 per cent., and of the females 45.77 per cent. The post-censal estimates, which are given in the following table, show a higher proportion in each of the capitals than was shown by the Census.

6. Metropolitan Population—Australia and Other Countries.—The abnormal concentration of population in the capitals of the States of Australia, as compared with other countries, may be readily seen from the following table. It may be mentioned, however, that, in most of the European countries, the capital is not always the most populous of many big cities, whereas, in Australia, the capital is invariably the most populous city, and in some States is the only town of important magnitude.

METROPOLITAN POPULATION.—AUSTRALIA AND OTHER COUNTRIES.

State or Country.	Metropolis.	Year.	Population.	Percentage on total of State or Country.
				%
New South Wales ..	Sydney ..	31st Dec., 1924.	1,012,070	44.89
Victoria ..	Melbourne ..		885,700	53.45
Queensland ..	Brisbane ..		245,015	29.35
South Australia ..	Adelaide ..		289,914	53.84
Western Australia ..	Perth ..		176,467	48.46
Tasmania ..	Hobart ..		56,507	25.94
Australia ..	(6 Cities) ..		2,665,673	45.44
New Zealand ..	Wellington ..	1.4.1925	118,490	8.94
Northern Ireland ..	Belfast ..	1923	429,000	33.57
Austria ..	Vienna ..	1923	1,866,147	28.56
Denmark ..	Copenhagen ..	1921	700,610	21.44
Hungary ..	Budapest ..	1921	1,184,616	14.91
Irish Free State ..	Dublin ..	1924	435,000	13.76
Saxony ..	Dresden ..	1919	587,758	12.58
England ..	London (a) ..	1924	4,576,505	11.81
Belgium ..	Brussels ..	1923	787,060	10.27
Netherlands ..	Amsterdam ..	1922	696,484	9.83
Norway ..	Oslo ..	1920	258,483	9.75
Bavaria ..	Munich ..	1919	630,711	8.83
Scotland ..	Edinburgh ..	1924	427,500	8.78
France ..	Paris ..	1921	2,906,472	7.41
Portugal ..	Lisbon ..	1921	435,359	7.31
Sweden ..	Stockholm ..	1924	438,896	7.27
Finland ..	Helsingfors ..	1921	200,208	5.88
Greece ..	Athens ..	1920	292,991	5.29
Czecho-Slovakia ..	Prague ..	1921	676,657	4.98
Spain ..	Madrid ..	1923	813,991	3.74
Poland ..	Warsaw ..	1921	936,046	3.44
Germany ..	Berlin ..	1919	1,979,000	3.31
Switzerland ..	Berne ..	1920	104,626	2.70
Italy ..	Rome ..	1921	692,353	1.85
Russia (European) ..	Leningrad ..	1923	1,067,328	0.80

(a) Population of Greater London in 1924 was 7,665,833.

7. Principal Urban Centres.—Apart from seaports and certain mining centres, the concentration of population in Australia is often associated with the rainfall, and in the following list of "Urban Incorporated Areas" the average annual rainfall is shown for all such places where rainfall records are kept.

The following table gives particulars of the principal Urban Incorporated Areas in Australia which, at the date of the Census, on 4th April, 1921, had a population of over 3,000. There were, in all, 50 localities returned as having a population upwards of 20,000. Of these 19 were in New South Wales, 18 in Victoria, 7 in Queensland, 3 in South Australia, 1 in Western Australia, and 2 in Tasmania.

By the term "Urban Incorporated Areas" is meant those urban districts which have been incorporated for municipal purposes. The populations shown in each case are those recorded within the municipal boundaries.

POPULATION AND RAINFALL, PRINCIPAL URBAN INCORPORATED AREAS.—
AUSTRALIA, CENSUS, 4th APRIL, 1921.

Town.	State in which Situated.	Approx. Population.	Average Annual Rainfall.	Town.	State in which Situated.	Approx. Population.	Average Annual Rainfall.
100,000 and over—			Inches.	10,000 and under			Inches.
Sydney ..	N.S.W.	104,153	48.04	Annandale ..	N.S.W.	12,648	(a)
Melbourne ..	Vic.	103,251	25.66	Auburn ..	"	13,563	(a)
50,000 and under				Ballarat East ..	Vic.	13,452	(a)
100,000—				Bankstown ..	N.S.W.	10,670	34.32
Perth ..	W.A.	64,166	23.91	Bexley ..	"	14,746	(a)
Prahran ..	Vic.	50,290	25.38	Burwood ..	"	15,709	40.24
Randwick ..	N.S.W.	50,841	45.07	Coburg ..	Vic.	18,114	(a)
20,000 and under				Concord ..	N.S.W.	11,013	(a)
50,000—				Drummoyne ..	"	18,761	(a)
Adelaide ..	S.A.	39,552	21.05	Fremantle ..	W.A.	17,566	20.83
Ashfield ..	N.S.W.	33,636	40.71	Geelong ..	Vic.	14,805	21.35
Ballarat ..	Vic.	21,215	26.96	Goulburn ..	N.S.W.	12,715	24.84
Balmain ..	N.S.W.	32,104	(a)	Granville ..	"	13,328	(a)
Bendigo ..	Vic.	25,682	21.17	Hamilton ..	"	14,196	(a)
Brighton ..	"	21,235	24.93	Hindmarsh ..	S.A.	12,454	(a)
Brisbane ..	Qld.	42,629	45.65	Hurstville ..	N.S.W.	13,394	(a)
Brisbane South ..	"	37,151	(a)	Illawarra Central and North ..	"	11,560	(a)
Broken Hill ..	N.S.W.	26,337	10.08	Kew ..	Vic.	17,382	27.93
Brunswick ..	Vic.	44,484	(a)	Kogarah ..	N.S.W.	18,226	(a)
Camberwell ..	"	23,835	27.63	Lidcombe ..	"	10,522	34.40
Canterbury ..	N.S.W.	37,639	39.89	Lithgow ..	"	13,275	33.44
Caulfield ..	Vic.	40,693	27.58	Manly ..	"	18,507	46.93
Collingwood ..	"	34,239	(a)	Maryborough ..	Qld.	10,629	45.81
Essendon ..	"	35,269	24.24	Mascot ..	N.S.W.	10,929	(a)
Fitzroy ..	"	34,938	(a)	Newcastle ..	"	14,566	46.41
Footscray ..	"	33,775	(a)	Norwood ..	"	"	"
Glebe ..	N.S.W.	22,754	46.00	Kensington ..	S.A.	15,000	24.63
Hawthorn ..	Vic.	29,165	27.87	Parramatta ..	N.S.W.	14,594	36.08
Hobart ..	Tas.	43,589	23.59	Port Melbourne ..	Vic.	13,089	(a)
Ipswich ..	Qld.	20,517	34.52	Ryde ..	N.S.W.	14,854	35.22
Ithaca ..	"	20,905	(a)	Sandringham ..	Vic.	11,316	(a)
Launceston ..	Tas.	24,305	28.16	St. Peters ..	N.S.W.	12,700	(a)
Leichhardt ..	N.S.W.	29,356	(a)	St. Peters ..	S.A.	11,098	22.29
Malvern ..	Vic.	32,306	31.14	Subiaco ..	W.A.	13,647	33.35
Marrickville ..	N.S.W.	42,240	39.09	Thebarton ..	S.A.	14,031	(a)
Melbourne South ..	Vic.	46,873	(a)	Waratah ..	N.S.W.	12,192	(a)
Mosman ..	N.S.W.	20,056	45.19	Waterloo ..	"	11,199	(a)
Newtown ..	"	28,168	(a)	Wickham ..	"	12,151	(a)
Northcote ..	Vic.	30,519	(a)	Williamstown ..	Vic.	19,442	(a)
Paddington ..	N.S.W.	26,364	(a)	Windsor ..	Qld.	18,250	35.24
Petersham ..	"	26,236	(a)				
Port Adelaide ..	S.A.	30,101	(a)	5,000 and under			
Redfern ..	N.S.W.	23,978	(a)	10,000—			
Richmond ..	Vic.	43,174	25.65	Albury ..	N.S.W.	7,751	27.95
Rockdale ..	N.S.W.	25,189	(a)	Alexandria ..	"	9,793	(a)
Rockhampton ..	Qld.	24,168	40.17	Armidale ..	"	5,407	31.77
St. Kilda ..	Vic.	38,579	(a)	Bathurst ..	"	9,440	23.93
Sydney North ..	N.S.W.	48,438	(a)	Botany ..	"	6,214	45.73
Toowoomba ..	Qld.	20,676	36.66	Boulder ..	W.A.	8,212	9.84
Townsville ..	"	21,353	48.39	Bundaberg ..	Qld.	9,276	43.87
Unley ..	S.A.	34,093	24.98	Cairns ..	"	7,464	90.48
Waverley ..	N.S.W.	36,797	(a)				
Willoughby ..	"	28,067	49.75				
Woollahra ..	"	25,439	(a)				

(a) No record.

POPULATION AND RAINFALL, PRINCIPAL URBAN INCORPORATED AREAS.—
AUSTRALIA, CENSUS 4TH APRIL, 1921—*continued.*

Town.	State in which Situated.	Approx. Population.	Average Annual Rainfall.	Town.	State in which Situated.	Approx. Population.	Average Annual Rainfall.
5,000 and under			Inches.	3,000 and under			Inches.
10,000—<i>cont.</i>				5,000—			
Carrum ..	Vic.	5,225	(a)	Adamstown ..	N.S.W.	3,959	(a)
Castlemaine ..	"	5,331	22.21	Albany ..	W.A.	3,976	36.68
Charters Towers ..	Qld.	9,489	25.63	Ararat ..	Vic.	4,653	23.60
Claremont ..	W.A.	5,511	31.24	Bunbury ..	W.A.	4,475	36.47
Cottesloe ..	"	5,033	(a)	Canley Vale ..	N.S.W.	3,106	35.10
Dubbo ..	N.S.W.	5,082	22.13	Carrington ..	"	3,115	(a)
Enfield ..	"	8,530	(a)	Casino ..	"	3,455	43.52
Erskineville ..	"	7,553	38.05	Collie ..	W.A.	3,313	38.28
Geelong West ..	Vic.	9,641	(a)	Cootamundra ..	N.S.W.	3,551	23.20
Glennelg ..	S.A.	7,994	18.37	Cowra ..	"	3,716	23.62
Glenorchy ..	Tas.	6,344	25.86	Darlington ..	"	3,651	(a)
Grafton and Grafton South ..	N.S.W.	6,077	33.86	Daylesford ..	Vic.	3,328	33.96
Gympie ..	Qld.	6,537	46.25	Dundas ..	N.S.W.	3,523	(a)
Hamilton ..	"	8,873	(a)	Eaglehawk ..	Vic.	4,719	(a)
Hamilton ..	Vic.	5,097	26.94	Echuca ..	"	3,745	16.91
Hunter's Hill ..	N.S.W.	7,900	41.33	Forbes ..	N.S.W.	4,373	19.84
Kalgoorlie ..	W.A.	7,897	9.84	Fremantle ..	W.A.	4,423	33.84
Katoomba ..	N.S.W.	9,055	55.75	North ..	"	3,545	32.65
Lane Cove ..	"	7,592	(a)	Geraldton ..	"	4,174	18.92
Lismore ..	"	8,700	51.05	Glen Innes ..	N.S.W.	4,974	31.83
Liverpool ..	"	6,302	(a)	Henley and Grange ..	S.A.	3,980	17.72
Mackay ..	Qld.	6,313	69.15	Horsham ..	Vic.	3,760	17.71
Maitland West ..	N.S.W.	8,457	34.01	Inverell ..	N.S.W.	4,369	30.46
Mentone and Mor-dialloc ..	Vic.	5,674	26.05	Junee ..	"	3,560	20.44
Morewether ..	N.S.W.	5,908	(a)	Kempsey ..	"	3,691	44.42
Mildura ..	Vic.	5,101	11.15	Lambton ..	"	3,550	40.67
Mount Morgan ..	Qld.	7,220	31.43	Lambton, New ..	"	3,551	32.86
Newtown and Chilwell ..	Vic.	7,240	(a)	Maitland East ..	"	4,744	20.77
Oakleigh ..	"	6,076	29.78	Maryborough ..	Vic.	4,937	37.14
Orange ..	N.S.W.	7,393	25.26	Midland Junction ..	W.A.	4,937	37.14
Port Pirie ..	S.A.	9,801	13.55	Mores ..	N.S.W.	3,020	23.63
Prospect and Sherwood ..	N.S.W.	8,737	33.70	Mount Gambier ..	S.A.	3,969	31.34
Sandgate ..	Qld.	6,273	46.89	Mudgee ..	N.S.W.	3,170	21.75
Smithfield ..	N.S.W.	5,303	(a)	Norham ..	W.A.	3,602	16.86
Strathfield ..	"	7,594	(a)	Parkes ..	N.S.W.	3,941	20.92
Tamworth ..	"	7,284	27.39	Penrith ..	"	3,604	29.87
Toowong ..	Qld.	9,987	38.59	Roma ..	Qld.	3,249	24.03
Wagga Wagga ..	N.S.W.	7,679	21.40	Sale ..	Vic.	3,769	23.82
Wallsend ..	"	6,446	(a)	Singleton ..	N.S.W.	3,270	28.67
Warrnambool ..	Vic.	7,730	27.84	Southport ..	Qld.	3,550	54.76
Warwick ..	Qld.	6,091	28.12	Stawell ..	Vic.	4,413	21.31
Wollongong ..	N.S.W.	6,708	44.52	Stockton ..	N.S.W.	4,598	(a)
Wonthaggi ..	Vic.	5,170	34.83	Temora ..	"	3,048	20.34
Wynnum ..	Qld.	8,355	38.17	Vaucluse ..	"	3,727	47.60
				Walleraro ..	S.A.	3,308	14.18
				Wangaratta ..	Vic.	3,689	24.67
				Wellington ..	N.S.W.	3,924	23.01
				Windsor ..	"	3,808	30.42
				Young ..	"	3,233	25.16

(a) No record.

§ 4. Elements of Increase.

1. Natural Increase.—(i) *General.* The two factors which contribute to the growth of a population are the "natural increase" by excess of births over deaths, and the "net immigration," i.e., the excess of arrivals over departures. While the relative potency of these factors depends upon a variety of causes, it may be said that, in general, in the case of a new country "net immigration" provides an important part of the increase of population, while in an old country "natural increase," modified more or less by "net emigration," or excess of departures over arrivals, is the principal element of increase. A graph showing the natural increase to the population of each State and of Australia, from year to year since 1860, accompanies this Chapter.

POPULATION.—NATURAL INCREASE (a), 1861 TO 1924.

Period.	States.						Territories.		Australia.
	N.S.W. (b)	Victoria.	Q'land.	S. Aust. (c)	W. Aust.	Tas.	North- ern. (d)	Fed. Cap. (e)	
MALES.									
1861 to 1870	47,905	69,283	8,183	20,526	1,519	7,174	..	..	154,590
1871 to 1880	64,107	67,117	14,664	23,655	1,733	6,549	..	..	177,825
1881 to 1890	97,411	73,142	25,858	33,488	2,757	11,377	..	..	244,033
1891 to 1900	105,526	79,251	38,249	28,320	4,838	13,262	..	..	269,446
1901 to 1910	115,306	73,280	38,043	26,649	19,045	16,658	-487	..	288,494
1911 to 1920	149,100	87,548	54,391	35,086	22,517	18,059	-326	153	366,528
1921 ..	16,515	9,626	6,241	3,467	1,779	1,778	-31	12	39,387
1922 ..	17,204	10,551	5,891	3,613	2,169	1,911	-14	12	41,337
1923 ..	15,744	9,430	5,464	3,249	2,107	1,748	5	-4	37,743
1924 ..	15,463	9,637	5,610	3,297	2,176	1,523	-13	4	37,697
1861 to 1924	644,281	488,865	202,594	181,350	60,640	80,039	-866	177	1,657,080

FEMALES.

1861 to 1870	56,670	80,534	11,137	21,210	2,406	9,059	..	..	181,016
1871 to 1880	75,843	79,023	21,997	25,552	2,840	8,891	..	..	214,146
1881 to 1890	112,294	87,964	39,500	35,353	4,347	13,592	..	..	293,050
1891 to 1900	121,037	93,664	49,794	30,235	10,430	14,499	..	..	319,659
1901 to 1910	130,460	82,460	48,958	27,455	24,822	16,549	61	..	330,765
1911 to 1920	168,873	93,144	65,736	36,143	29,447	18,425	197	150	412,115
1921 ..	18,095	9,800	6,946	3,525	2,548	1,780	30	11	42,735
1922 ..	18,800	10,582	6,944	3,780	2,795	1,909	24	14	44,848
1923 ..	17,277	9,228	6,625	3,482	2,817	1,772	29	13	41,243
1924 ..	17,407	10,000	6,771	3,425	2,862	1,737	26	22	42,250
1861 to 1924	736,756	556,399	264,408	190,160	85,314	88,213	367	210	1,921,827

PERSONS.

1861 to 1870	104,575	149,817	19,320	41,736	3,925	16,233	..	..	335,606
1871 to 1880	139,950	146,140	36,661	49,207	4,573	15,440	..	..	391,971
1881 to 1890	209,705	161,106	65,358	68,841	7,104	24,969	..	..	537,083
1891 to 1900	226,563	172,915	88,043	58,555	15,268	27,761	..	..	589,105
1901 to 1910	245,766	155,740	87,001	54,104	43,867	33,207	-426	..	619,259
1911 to 1920	317,973	180,692	120,127	71,229	51,964	36,484	-129	303	778,643
1921 ..	34,610	19,426	13,187	6,992	4,327	3,558	-1	23	82,122
1922 ..	36,004	21,133	12,835	7,393	4,964	3,820	10	26	86,185
1923 ..	33,021	18,658	12,089	6,731	4,924	3,520	34	9	78,986
1924 ..	32,870	19,637	12,381	6,722	5,038	3,260	13	26	79,947
1861 to 1924	1,381,037	1,045,264	467,002	371,510	145,954	168,252	-499	387	3,578,907

(a) Excess of births over deaths. (b) Including Federal Capital Territory prior to 1911.

(c) Including Northern Territory prior to 1901. (d) Included in South Australia prior to 1901.

(e) Part of New South Wales prior to 1911.

NOTE.—Minus sign (—) denotes excess of deaths over births.

In the natural increase, females have exceeded the males during the period under review. This is due to the higher death rate among males, the effect of which is augmented by the larger number of males subject to the greater risk of death. Although males predominate in both births and deaths, they exceed the females to a greater degree in the deaths than in the births.

(ii) *Comparison with Other Countries.*—Notwithstanding its comparatively low birth-rate, Australia has a high rate of natural increase, owing to the fact that its death-rate is very low. The following table gives a comparison between the average rates per annum of natural increase for some of the principal countries of the world for which such information is available, and those for the several States of Australia and the Dominion of New Zealand :—

NATURAL INCREASE PER ANNUM PER 1,000 OF MEAN POPULATION.

(VARIOUS COUNTRIES.)

Country.	Natural Increase per 1,000.	Country.	Natural Increase per 1,000.
Australasia (1920-24)—		Europe— <i>continued.</i>	
Tasmania	16.72	Switzerland	(e) 5.00
Queensland	16.03	Germany	(e) 4.92
New South Wales ..	15.78	Spain	(d) 4.58
Australia	14.61	Ireland	(c) 3.89
Western Australia ..	14.03	Belgium	(e) 2.82
New Zealand	14.01	France	(e) — 3.36
South Australia ..	13.71		
Victoria	12.48	Asia—	
Europe—		Japan	(f) 11.19
Russia (1923)	19.80	Ceylon	(f) 7.04
Italy	(f) 14.50	Africa—	
Netherlands	(e) 13.16	Union of South Africa	
Norway	(g) 11.81	(whites only) ..	(f) 17.16
Denmark	(e) 11.28	America—	
Scotland	(g) 10.34	Province of Quebec ..	(e) 20.09
England and Wales ..	(g) 9.15	Uruguay	(f) 14.24
Prussia	(f) 8.31	Jamaica	(a) 12.56
Sweden	(g) 7.93	Province of Ontario ..	(f) 11.72
Finland	(f) 7.78	Chile	(b) 10.27

(a) 1913-17.

(b) 1915-19.

(c) 1916-20.

(d) 1917-21.

(e) 1918-22.

(f) 1919-23.

(g) 1920-24.

NOTE.—The minus sign (—) indicates a decrease.

Graphs of natural increase for each of the States, as well as for Australia, accompany this chapter.

2. *Net Immigration.**—The other factor of increase in the population, viz., the excess of arrivals over departures, known as "net immigration" is, from its nature, much more subject to variations than is the factor of "natural increase." These variations are due to numerous causes, some of which are referred to later in this chapter, in dealing with the influences which affect the growth of population.

* The subject of immigration is dealt with at some length later in this chapter.

POPULATION.—INCREASE BY NET IMMIGRATION, 1861 TO 1924 INCLUSIVE.

Period.	States.						Territories.		
	N.S.W.	Victoria.	Q'land.	S. Aust. (a)	W. Aust.	Tas.	North- ern. (b)	Fed. Cap. (c)	Australia.
MALES.									
1861 to 1870	26,365	— 2,355	44,221	10,028	4,395	— 3,310	..	..	79,344
1871 to 1880	68,724	— 13,789	40,128	28,889	— 259	502	..	..	124,195
1881 to 1890	100,341	71,819	73,381	— 14,877	9,112	4,508	..	..	244,284
1891 to 1900	7,817	— 72,997	13,183	— 9,732	76,396	48	..	..	14,715
1901 to 1910	26,828	— 28,571	12,786	— 441	28,838	— 7,555	— 1,063	..	30,822
1911 to 1920	61,633	19,773	16,651	3,657	— 3,593	9,666	499	— 60	88,894
1921 ..	61	1,476	2,111	3,377	— 174	989	162	54	7,610
1922 ..	6,092	13,170	5,004	1,718	2,717	— 2,443	— 164	303	26,397
1923 ..	3,756	8,490	7,046	4,616	3,936	— 1,696	— 18	— 32	26,098
1924 ..	8,101	7,999	6,193	5,064	3,736	— 2,500	24	232	28,849
1861 to 1924	309,596	5,015	220,704	32,299	125,104	— 21,123	884	497	671,208
FEMALES.									
1861 to 1870	18,506	38,229	23,675	7,200	1,469	— 1,858	..	..	87,221
1871 to 1880	34,476	2,329	18,979	13,751	112	— 2,038	..	..	67,609
1881 to 1890	62,087	42,198	42,337	— 11,410	2,725	520	..	..	138,457
1891 to 1900	12,650	— 37,433	505	— 5,663	39,801	304	..	..	10,164
1900 to 1910	10,956	— 21,974	5,382	— 4,045	24,160	— 4,749	— 67	..	9,663
1911 to 1920	69,906	26,036	14,830	9,252	6,120	7,869	318	84	118,677
1921 ..	1,645	1,875	2,309	1,036	239	1,017	— 92	15	8,044
1922 ..	2,920	5,236	2,220	1,672	212	— 769	— 29	164	11,626
1923 ..	264	8,007	3,743	207	1,347	— 1,674	— 12	88	11,442
1924 ..	4,034	4,079	5,152	1,972	1,535	— 1,995	5	118	14,900
1861 to 1924	216,916	68,582	119,132	13,972	77,720	— 19,111	123	469	477,803
PERSONS.									
1861 to 1870	44,871	35,874	67,896	17,228	5,864	— 5,168	..	..	166,565
1871 to 1880	103,200	— 11,460	59,107	42,640	— 147	1,536	..	..	191,804
1881 to 1890	162,428	114,017	115,718	— 26,287	11,837	5,028	..	..	382,741
1891 to 1900	20,467	— 110,430	13,688	— 15,395	116,197	352	..	..	24,879
1901 to 1910	37,784	— 50,545	18,168	— 4,486	52,998	— 12,304	— 1,130	..	40,485
1911 to 1920	131,539	45,809	31,481	12,909	2,527	— 17,535	817	24	207,571
1921 ..	1,584	3,351	4,420	4,413	65	2,006	— 254	69	15,654
1922 ..	9,012	18,406	7,224	3,390	2,929	— 3,212	— 193	467	38,023
1923 ..	3,492	16,497	10,789	4,823	5,283	— 3,370	— 30	56	37,540
1924 ..	12,135	12,078	11,345	7,036	5,271	— 4,495	29	350	43,749
1861 to 1924	526,512	73,597	339,836	46,271	202,824	— 40,234	761	966	1,149,011

(a) Including Northern Territory up to 1900. (b) Included in South Australia up to 1900.

(c) Part of New South Wales prior to 1911.

NOTE.—Minus sign (—) indicates the excess of departures over arrivals.

From 1860 to 1924 the increment to the population arising from the excess of births over deaths amounted to 3,578,907, or 75.70 per cent. of the total increase, while the increase from net immigration amounted to 1,149,011 or 24.30 per cent. During the 24 years of the present century the total increase to the population was made up of 1,725,142, or 81.83 per cent. natural increase, and 383,022 or 18.17 per cent. by net immigration. The greatest increase to the population by net immigration which has occurred in any one decade was during the ten years 1881 to 1890. This period, however, concluded in world wide speculation which in Australia took the form of speculation in land values, and the effect of the financial collapse which followed this boom is shown by the small increment by migration from 1891 to 1910. For many of the years during this last-mentioned period there was an actual loss to Australian population by net migration.

In 1907 the stream of migration again turned in favour of Australia, and during the five years 1909-1913 the net immigration represented 281,193. The war interrupted the flow, but in 1924 the net immigration represented 43,749 persons.

3. Total Increase.—The total increase of the population is obtained by the combination of the natural increase with the net immigration.

The following table gives the total increase in each decade from 1861 to 1920 and for the four years 1921 to 1924 :—

POPULATION.—TOTAL INCREASE, 1861 TO 1924.

Period.	States.						Territories.			Australia.
	N.S.W.	Victoria.	Q'land.	S. Aust. (a)	W. Aust.	Tas.	North- ern, (b)	Fed. Cap. (c)		
MALES.										
1861 to 1870	74,270	66,928	52,404	30,554	5,914	3,864	..	..	233,934
1871 to 1880	132,831	53,328	54,792	52,544	1,474	7,051	..	..	302,020
1881 to 1890	197,752	144,961	99,239	18,611	11,869	15,885	..	..	488,317
1891 to 1900	113,343	6,254	51,432	18,588	81,234	13,310	..	..	284,161
1901 to 1910	142,134	44,709	50,829	26,208	47,883	9,103	1,550	..	319,316	
1911 to 1920	210,733	107,321	71,042	38,743	18,924	8,393	173	93	455,422	
1921 ..	16,454	11,102	8,352	6,844	1,605	2,767	193	66	46,997	
1922 ..	23,296	23,721	10,895	5,331	4,886	532	178	315	67,734	
1923 ..	19,500	17,920	12,510	7,865	6,043	52	13	36	63,841	
1924 ..	23,564	17,636	11,803	8,361	5,912	977	11	236	66,546	
1861 to 1924	953,877	493,880	423,298	213,649	185,744	58,916	1,750	674	2,328,288	
FEMALES.										
1861 to 1870	75,176	118,763	34,812	28,410	3,875	7,201	..	..	268,237
1871 to 1880	110,319	81,352	40,976	39,303	2,952	6,853	..	..	281,755
1881 to 1890	174,381	130,162	81,837	23,943	7,072	14,112	..	..	431,507
1891 to 1900	133,687	56,231	50,299	24,572	50,231	14,803	..	..	329,823
1900 to 1910	141,416	60,486	54,340	23,410	48,982	11,800	6	..	340,428	
1911 to 1920	238,779	119,180	80,566	45,395	35,567	10,556	515	234	530,792	
1921 ..	19,740	11,675	9,255	4,561	2,787	2,797	62	26	50,779	
1922 ..	21,720	15,818	9,164	5,452	3,007	1,140	5	178	56,474	
1923 ..	17,013	17,235	10,368	3,689	4,164	98	17	101	52,685	
1924 ..	21,441	14,079	11,923	5,397	4,397	258	31	140	57,150	
1861 to 1924	953,672	624,981	383,540	204,132	163,034	69,102	490	679	2,399,630	
PERSONS.										
1861 to 1870	149,446	185,691	87,216	58,964	9,789	11,065	..	..	502,171
1871 to 1880	243,150	134,680	95,768	91,847	4,426	13,904	..	..	583,775
1881 to 1890	372,133	275,123	181,076	42,554	18,941	29,997	..	..	919,824
1891 to 1900	247,030	62,485	101,731	43,160	131,465	28,113	..	..	613,984
1901 to 1910	283,550	105,195	105,169	49,618	96,865	20,903	1,556	..	659,744	
1911 to 1920	449,512	226,501	151,608	84,138	54,491	18,949	688	327	986,214	
1921 ..	36,194	22,777	17,607	11,405	4,392	5,564	255	92	97,776	
1922 ..	45,016	39,539	20,059	10,783	7,893	608	183	493	124,208	
1923 ..	36,513	35,155	22,878	11,554	10,207	150	4	65	116,526	
1924 ..	45,005	31,715	23,726	13,758	10,309	1,235	42	376	123,696	
1861 to 1924	1,907,549	1,118,861	806,838	417,781	348,778	128,018	1,260	1,353	4,727,918	

(a) Including Northern Territory up to 1900.

(b) Included in South Australia up to 1900.

(c) Part of New South Wales prior to 1911.

NOTE.—Minus sign (—) denotes decrease.

For Australia as a whole the greatest numerical increase during any decennial period occurred in the decade 1911 to 1920. The increase during this decade amounted to 986,214, or 22.29 per cent. The greatest proportional increase, on the other hand,

occurred during the decade 1881-1890 when it amounted to 919,824, which, on the smaller population of that time represented an increase of 41.22 per cent. for the decade. Of this increase of 919,824, 537,083 or 58.38 per cent. was from the excess of births over deaths, whereas during the decade 1911-1920, of the total increase of 986,214 the natural increase produced 778,643 or 78.96 per cent. A graph showing the increase in the population of each State and of Australia from year to year since 1860 accompanies this chapter.

As regards the individual States the maximum increases in any decennium are as follows:—New South Wales, 449,512, in 1911-20; Victoria, 275,123, in 1881-90; Queensland, 181,076, in 1881-90; South Australia, 91,847, in 1871-80; Western Australia, 131,465, in 1891-1900; Tasmania, 29,997, in 1881-1890.

4. Rates of Increase.—(i) *For various Countries.* The table hereunder gives rates of increase in population for Australia, and its component States, and for other countries:—

POPULATION.—RATES OF INCREASE (VARIOUS COUNTRIES), 1887 TO 1924.

Countries.	Annual Rate of Increase in Population during period—							
	1887 to 1891.	1892 to 1896.	1897 to 1901.	1902 to 1906.	1907 to 1911.	1912 to 1916.	1917 to 1921.	1924.
AUSTRALASIA—	%	%	%	%	%	%	%	%
Australia ..	3.06	1.86	1.49	1.38	2.03	1.95	1.99	2.15
New South Wales (a)	3.23	1.99	1.57	1.99	2.03	2.61	2.17	2.05
Victoria ..	3.12	0.37	0.52	0.18	2.17	1.38	1.63	1.95
Queensland ..	3.80	2.49	2.25	1.35	2.76	2.20	2.21	2.92
South Australia (b)	1.15	1.63	0.77	0.27	2.46	1.52.	2.34	2.61
Western Australia	5.54	20.81	7.25	6.22	2.43	1.76	1.27	2.91
Tasmania ..	2.87	1.06	1.83	1.33	0.65	0.58	1.84	-0.56
New Zealand ..	1.47	2.41	1.98	2.86	2.56	1.61	2.32	2.09
EUROPE—								
England and Wales	1.11	1.15	1.15	1.04	1.04	-0.95	1.89	0.89
Scotland ..	0.75	1.06	1.06	0.55	0.56	0.31	0.24	-0.40
Ireland ..	-0.94	-0.60	-0.43	-0.22	-0.06	-0.21	0.58	..
Austria ..	0.83	0.79	1.05	0.87	0.86	(c) 0.80	(g)	..
Belgium ..	0.75	1.15	0.92	1.26	0.69	0.54	-0.56	..
Denmark ..	0.87	0.99	1.32	1.12	1.26	1.20	2.13	..
Finland ..	1.51	1.20	1.41	1.36	1.43	1.18	0.25	..
France ..	0.06	0.09	0.24	0.15	0.16	-0.72	0.55	h 0.13
Germany ..	1.09	1.17	1.51	1.46	1.36	0.71	-1.62	..
Hungary ..	1.01	0.92	1.03	0.77	0.84	(c) 0.84	(g)	..
Italy ..	0.71	0.68	0.61	0.52	0.80	1.16	0.22	j 1.17
Netherlands ..	1.03	1.28	1.30	1.53	1.22	1.72	1.16	..
Norway ..	0.54	0.96	1.31	0.52	0.66	1.00	1.14	0.87
Prussia ..	1.15	1.29	1.59	1.57	1.48	0.85	-1.67	j 1.30
Rumania ..	1.34	1.15	1.41	1.46	1.48	(e) 2.77	(g)	..
Serbia ..	2.08	1.37	1.57	1.52	1.55	(c) 1.72	(g)	..
Spain ..	0.48	0.45	0.45	0.52	0.87	0.66	(f) 0.34	..
Sweden ..	0.40	0.61	0.86	0.61	0.84	0.70	0.64	0.51
Switzerland ..	0.40	1.22	1.10	1.28	1.17	0.81	0.01	h 0.21
ASIA—								
Ceylon ..	1.35	1.41	2.03	1.62	1.20	1.71	1.28	j 1.80
Japan ..	1.12	0.96	1.25	1.29	1.08	1.42	0.37	1.12
AMERICA—								
Canada ..	1.08	0.97	1.19	2.99	2.99	(d) 3.87	(i) 2.00	..
Chile ..	0.72	2.66	0.90	1.53	1.56	1.66	0.07	..
Jamaica ..	1.37	1.66	1.72	1.63	0.28	1.36	(f) 0.62	..
United States ..	2.15	1.93	2.02	2.00	1.82	1.67	1.21	..

(a) Including Federal Capital Territory. (b) Including Northern Territory. (c) 1911 to 1912.

(d) 1911 to 1914.

(e) 1911 to 1915.

(f) 1916 to 1920.

(g) Not available owing to changes of boundaries. (h) Year 1922. (i) 1911-21. (j) 1923.

NOTE.—The minus sign (—) denotes decrease.

(ii) *Variations in the Rates.*—The fluctuations in the rates of increase in the population of Australia are, for the greater part, due to variations in the volume of immigration. The more important of these periodic variations, so far as they affected the population of Australia as a whole, have been referred to in the preceding sub-sections dealing with net immigration. The large increase in the population of Western Australia during the quinquennium 1892–6 marks the opening up of the gold mines of that State.

§ 5. Seasonal Variations of Population.

1. *Variations in Natural Increase.*—The following table shows the natural increase to the population, during each quarter of the year, based on the experience of the ten years 1915–1924. For Australia as a whole, the rate of natural increase was greatest in the quarter ended 31st March, and least in the quarter ending 31st December, the difference between the rates of increase for these two periods being equal to 21 persons for every 100,000 of the population. In New South Wales, Victoria, South Australia and Western Australia the March quarter was the most favourable, in Queensland the June quarter, and in Tasmania the September quarter. The natural increase was lowest in Queensland, South Australia, and Western Australia in the December quarter, in New South Wales and Tasmania in the June quarter, and in Victoria in the September quarter. The differences between the least favourable and the most favourable quarters ranged from 16 per 100,000 of the population in Victoria to 50 per 100,000 in Western Australia.

During recent years there have been two unusual occurrences which have considerably disturbed the normal contributions of the several quarters. The first of these was the payment of the Maternity Allowance which commenced on the 10th October, 1912, with the result that births were registered in the December quarter of that year, which otherwise would not have been registered until the March quarter of the following year. As the results given in this connexion are the averages for decennial periods, this factor is present in the results given for the December quarter up to and including the decade 1912–21, but, with the increasing population it became less important from year to year. Although this factor did not seriously disturb the order of increase in the various quarters, it very materially reduced the margins between the highest and the lowest quarters.

The other disturbance referred to was the influenza epidemic of 1919. The total number of deaths during 1919, for which influenza was stated to be the primary cause, was 11,989, which were distributed over the four quarters of the year as follows:—March quarter, 926; June quarter, 5,958; September quarter, 4,658; December quarter, 447. Prior to this epidemic, the September quarter had been consistently the highest, and the June quarter had been, almost invariably, next in order during each decade from 1901–10 to 1909–18, while the March quarter had been almost consistently the lowest. The same consistency, however, did not prevail throughout the individual years. The deaths from influenza in the June and September quarters, and the comparative freedom of the March quarter from such deaths, have given the March quarter precedence in the four successive decennial periods in which the year 1919 is included. During the same periods, the September quarter has been consistently second, and the December quarter has most frequently been the lowest.

The precedence—with regard to its contribution to the natural increase in population—which was so consistently held by the September quarter prior to the influenza epidemic of 1919, was due entirely to its higher birth rate. With the exception of the year 1915, the September quarter was distinguished by a greater number of births than any other quarter in each of the 19 years 1906–24, and with the exceptions of 1915 and 1919, it

showed the greatest birth rate per 1,000 persons. On the other hand, with the same two exceptions, the September quarter showed the highest death rate per 1,000. The high death rate in conjunction with the high birth rate is due in some measure to the increased risk, from the greater number of births, of infantile deaths and deaths due to childbirth.

POPULATION.—AVERAGE QUARTERLY NATURAL INCREASE, 1915 TO 1924.

State or Territory.	Average Natural Increase for Quarter ended on last day of—								Average Natural Increase per Annum, 1915-24.	
	March.		June.		September.		December.		Persons.	%°°
	Persons.	%°°	Persons.	%°°	Persons.	%°°	Persons.	%°°		
N.S.W.	8,388	4.16	7,890	3.89	8,040	3.95	8,050	3.93	32,368	16.04
Victoria	4,665	3.13	4,484	2.99	4,455	2.97	4,627	3.07	18,231	12.22
Q'land.	3,092	4.24	3,144	4.29	3,091	4.16	2,900	3.88	12,227	16.77
S. Aust.	1,745	3.67	1,734	3.64	1,684	3.52	1,655	3.44	6,818	14.35
W. Aust.	1,260	3.87	1,241	3.80	1,214	3.70	1,110	3.37	4,825	14.82
Tas. . .	893	4.31	853	4.14	910	4.45	892	4.36	3,548	17.13
N. Ter.	1	0.24	4	0.95	3	0.70	- 5	- 1.17	3	0.72
F.C.Ter.	7	3.26	6	2.17	7	2.51	6	2.13	26	12.10
Total	20,051	3.82	19,356	3.67	19,404	3.66	19,235	3.61	78,046	14.86

NOTE.—The minus sign (—) indicates an excess of deaths over births, and °/° denotes "per thousand."

2. *Variations in Net Immigration.*—In the following table the figures relating to the separate States and Territories include interstate migrants, but so far as these persons are concerned, the arrivals into any State are departures from some other State, so that they do not affect the figures shown for Australia as a whole, which, therefore, represent the overseas arrivals and departures. For each of the decades from 1901-1910 to 1904-1913 inclusive, the December quarter showed the greatest rate of increase from migration, with the other quarters consistently in order directly reverse to their position on the calendar. The dispatch of troops from Australia during November and December, 1914, and the effects of the war on the overseas passenger traffic, altered the position so that in the decade 1905-14, and in each decade since, the September quarter has been the highest, with the March quarter second. On the average, however, of the three years 1922-24, which were not affected by the movements of troops, the December quarter again has first place. The precedence of the December quarter during the last three years was due, both to the small number of departures (22.49 per cent.) and to the large number of arrivals (29.38 per cent.) during that quarter. The normal quota for each quarter would of course be 25 per cent. in both cases. Notwithstanding that the interstate movement is very much greater than the overseas migration, the results shown in the following table are to some extent vitiated in their application to the particular States, by the inclusion of the war period. For instance, the losses shown for New South Wales and for Victoria in the June quarter, and for South Australia in the March and June quarters are entirely due to large embarkations of troops during those periods of the years 1915 and 1916. Although it is usual for Queensland to show a loss of population during the December quarter, owing to the return of sugar workers and tourists to the southern States, the loss for the decade 1915-24 is aggravated by the dispatch of troops. Again, Western Australia shows an annual loss of population by emigration, the quarters in which these losses occurred coinciding with times of heavy embarkations. The gain to Tasmania in the December quarter represents the influx of tourists from the mainland, whereas the departure of tourists and of other persons during the remainder of the year represents an average net annual loss of 1,635 persons.

POPULATION.—AVERAGE QUARTERLY NET IMMIGRATION, 1915 TO 1924.

State or Territory.	Quarter*ended on last day of—								Average Net Immigration per Annum, 1915-24.	
	March.		June.		September.		December.			
	Persons.	%°	Persons.	%°	Persons.	%°	Persons.	%°	Persons.	%°
N.S.W.	1,786	0.88	— 896	— 0.44	3,258	1.60	906	0.44	5,054	2.50
Victoria	2,005	1.34	— 1,191	— 0.79	866	0.58	2,279	1.51	3,959	2.65
Q'land.	1,262	1.73	5,764	7.86	1,610	2.17	— 5,553	— 7.44	3,083	4.23
S. Aust.	— 329	— 0.69	— 589	— 1.24	990	2.07	2,171	4.52	2,243	4.72
W. Aust.	— 294	— 0.90	395	1.21	490	1.49	— 1,213	— 3.68	622	— 1.91
Tas. ..	— 2,062	— 9.95	— 2,379	— 11.55	— 792	— 3.87	3,598	17.59	— 1,635	— 7.89
N.T. ..	29	6.92	68	16.13	— 7	— 1.63	— 124	— 28.94	— 34	— 8.12
F.C.T'er.	609	283.52	23	8.32	..	..	— 554	— 196.25	78	36.31
Total	3,006	0.57	1,195	0.23	6,415	1.21	1,510	0.28	12,126	2.31

NOTE.—The minus sign (—) denotes excess of departures over arrivals, and %° denotes "per thousand" of population.

§ 6. Influences affecting Increase and Distribution.

1. **Mineral Discoveries.**—The discovery of gold in Australia in 1851 was undoubtedly one of the most influential factors in bringing about a rapid settlement of the country. Its effect may be gauged by comparing the increase during the ten years preceding with that during the ten years succeeding the discovery. From 31st December, 1840, to 31st December, 1850, the increase was only 214,948 (from 190,408 to 405,356). During the succeeding decennium there was an increase of 740,229, the population advancing to 1,145,585 on 31st December, 1860. In 1861, owing to the opening up of the New Zealand goldfields, a rush of population from Australia set in, the result being that the net increase per annum to the population of Australia, which in 1855 amounted to 98,343, and even in 1860 was as much as 48,280, fell in 1861 to 22,564. In fact, during the year 1861 the departures from Australia exceeded the arrivals by 6,283, the gain of 22,564 being due to the births exceeding the deaths by 28,847.

In 1886 and subsequent years the gold discoveries of Western Australia led to such extensive migration to that State that its population, which on 31st December, 1885, amounted to only 35,959, increased during the next twenty years by 595 per cent., or by 10.18 per cent. per annum, to 250,138 in 1905. In this case, however, the additions to the population of the western State were largely drawn from the eastern States, so that the actual gain of population to Australia was relatively small.

2. **Pastoral Development.**—Very early in the colonization of Australia it was recognized that large areas were well adapted for pastoral pursuits, and pastoral developments led to the spread of population in various directions. As the numbers engaged in connexion therewith, compared with the value of the interests involved, are relatively small, and as pastoral occupancy tends to segregation rather than aggregation of population, the growth of the pastoral industry is not noticeably reflected in the population statistics.

3. **Agricultural Expansion.**—At the present time the area under crop in Australia is over 16½ million acres. Although substantial in itself, this area, viewed in relation to the total area of Australia, is relatively small, and represents only 0.87 per cent. of the total area. Per head of population the area under crop, however, is 2.9 acres, a fairly large area when allowance is made for the recency of Australian settlement. About 80 per cent. of the area under crop in 1923-24 was devoted to the production of wheat and hay, both of which, for profitable production in Australia, require a considerable area

in the one holding. Consequently, the agricultural districts are for the most part sparsely populated, though in a less marked degree than the pastoral areas.

4. **Progress of Manufacturing Industries.**—One direct effect of the development of manufacturing industries is the concentration of population in places offering the greatest facilities for the production of particular commodities. In Australia, where manufacturing industries are as yet in their infancy, the tendency throughout has been to concentrate the manufacturing establishments in each metropolis. This has accentuated the growth of the capital cities to an extent which, when compared with that of the rest of the country, appears somewhat abnormal.

5. **Influence of Droughts.**—Droughts, which at times so seriously affect the agricultural and pastoral industries of Australia, have a marked influence on the distribution of population. Districts, which in favourable seasons are fairly populous, become more or less depopulated in times of drought. This movement, however, ordinarily affects only the internal distribution of the population, and not the total, but severe drought may even make its influence felt in the statistics of the total population. Thus, in the case of the drought of 1902-3, the departures from Australia exceeded the arrivals for the two years 1903 and 1904 by 12,859. It may be noted also, that for the former of these years, the natural increase of population by excess of births over deaths was abnormally low, being only 51,150, as compared with 54,698 in the preceding, and 60,541 in the succeeding year. As the solution of the problem of dealing with droughts is advanced, their influence will be less marked.

6. **Assisted Immigration.**—Assisted immigration has been a factor of some importance in the increase of population. The number of persons brought to Australia by this means has varied considerably in different periods, according to the activities of Governments in this direction. The table given in sub-section 5 of § 10 hereinafter shows that 939,472 persons have been brought to Australia in connexion with schemes for assisting immigration.

7. **Other Influences.**—(i) *Commercial Crises.* The effect on population of a commercial crisis, such as that which occurred in the early nineties of last century, is clearly indicated by comparing the migration statistics of Australia for the five years 1887 to 1891 with those for the five years 1892 to 1896. During the earlier period the arrivals exceeded the departures by 146,872, whereas in the later period the excess of arrivals was only 2,064.

(ii) *War.* The war in South Africa left its impress on the population statistics of Australia, the departures during 1899 and 1900 exceeding the arrivals by 10,546. The effect of the recent European war is, of course, much more marked.

§ 7. Density.

1. **General.**—From certain aspects population may be less significant in respect of its absolute amount than in its relation to the area of the country. Australia, with an area of 2,974,581 square miles, and a population on 31st December, 1924, of 5,933,503, including aborigines, has a density of only 1.99 persons to the square mile, and is, therefore, the most sparsely populated of the civilized countries of the world. For the other continents the densities are approximately as follows:—Europe, 121; Asia, 63; Africa, 11; North and Central America, 18; and South America, 9. The population of Australia has thus about 22 per cent. of the density of South America; about 18 per cent. of that of Africa; about 11 per cent. of that of North and Central America; about 3 per cent. of that of Asia; and about $1\frac{1}{2}$ per cent. of that of Europe.

A map showing the density of population throughout Australia as at the Census of 1921 accompanies this chapter.

Particulars concerning the number and density of the population of the various countries of the world for the latest dates for which such information is available are given in the following table. These figures have in the main been taken from the 1925 issue of the "Statesman's Year Book," and in some instances, more particularly in the case of Asia and Africa, must be considered as rough approximations only, complete data not being obtainable.

Country.	Population.	Density. (a)	Country.	Population.	Density. (a)
EUROPE.			ASIA—continued.		
Russia	108,045,145	64.28	British Borneo, Brunei and Sarawak	883,248	11.45
Germany	59,852,632	328.48	Laos	850,000	8.81
Great Britain	48,067,637	395.19	Palestine	757,182	84.13
France	39,209,518	184.38	Hong Kong and Depend- encies	625,166	1,598.89
Italy	39,659,944	336.15	Goa, etc.	568,472	347.05
Poland	27,192,674	182.06	Khiva	519,438	21.37
Spain (including Canary and Balearic Islands) ..	21,763,147	111.72	Oman	500,000	6.10
Rumania	17,393,140	142.24	Timor, etc.	377,515	51.46
Czecho-Slovakia	13,613,172	251.21	Cyprus	310,709	86.69
Jugo-Slavia	12,017,323	125.01	French India	272,427	1,389.93
Hungary	7,980,143	222.16	Rhutan	250,000	12.50
Belgium	7,666,055	652.32	Kwan Chau Wan	207,449	1,091.84
Netherlands	7,212,739	546.21	Weihaiwei	154,416	541.81
Austria	6,535,759	201.91	Bahrain Islands	120,000	480.00
Portugal	6,032,991	169.99	Macao, etc.	74,866	18,716.50
Sweden	6,005,759	34.69	Maldiv Islands	70,000	608.70
Greece	5,536,375	165.87	Aden and Dependencies ..	54,923	6.10
Bulgaria	5,008,000	125.75	Sokotra	12,000	8.68
Switzerland	3,880,320	242.90			
Finland	3,435,249	25.92			
Denmark	3,289,183	191.86			
Norway	2,649,775	21.20			
Georgia	2,372,403	92.10			
Lithuania	2,168,071	36.37			
Azerbaijan	2,096,973	61.73			
Turkey	1,811,000	173.77			
Latvia	1,909,700	76.39			
Estonia	1,110,538	65.50			
Albania	831,877	47.88			
Danzig	386,000	511.94			
Luxemburg	260,767	261.03			
Malta	224,680	1,904.07			
Iceland	94,690	2.38			
Morocco	22,956	2,860.50			
Gibraltar	20,638	10,319.00			
San Marino	12,027	316.50			
Liechtenstein	10,716	164.86			
Andorra	5,231	27.39			
Spitzbergen	1,197	0.05			
Total	465,467,103	120.77			
ASIA.					
China and Dependencies ..	436,094,953	101.96			
British India	247,003,293	225.72			
Japan and Dependencies ..	81,780,200	295.27			
Federatory Independent States	71,939,187	101.18			
Netherlands East Indies ..	49,350,834	86.13			
Russia in Asia	18,271,101	3.35			
Turkey, including Armenia and Kurdistan	13,357,000	27.62			
Philippine Islands	10,314,310	89.67			
Siam	9,207,355	46.90			
Persia	9,000,000	14.33			
Afghanistan	12,000,000	48.08			
Tonking	6,850,453	169.02			
Annam	5,731,189	144.15			
Nepal	5,600,000	103.70			
Ceylon	4,703,344	185.67			
Arabia	4,500,000	4.50			
Cochin China	3,978,899	180.86			
Syria	3,000,000	50.00			
Bokhara	3,000,000	37.78			
Iraq	2,849,282	19.89			
Cambodia	2,449,771	42.31			
Federated Malay States ..	1,324,890	48.17			
Armenia	1,214,391	79.68			
Malay Protectorate, in- cluding Johore	1,123,264	49.95			
Kwantung	940,388	1,747.93			
Straits Settlements	928,539	580.34			

(a) Number of persons per square mile.

POPULATION, WORLD'S.—NUMBER AND DENSITY—*continued.*

Country.	Population.	Density. (a)	Country	Population.	Density. (a)
AFRICA—<i>continued.</i>			SOUTH AMERICA.		
Zanzibar	197,000	193.14	Brazil	30,635,605	9.35
Togoland (British) ..	188,265	14.94	Argentine Republic ..	9,548,092	8.28
Réunion	172,190	177.52	Colombia	5,855,077	13.28
Bechuanaland Protectorate ..	152,983	0.56	Peru	5,500,000	7.61
Spanish Guinea	150,000	13.88	Chile	3,902,126	13.46
Cape Verde Islands	149,793	101.21	Bolivia	2,990,220	5.82
Swaziland	133,563	20.00	Venezuela	2,998,987	7.52
Comoro and Mayotte	109,860	139.06	Ecuador and Galapagos ..	2,000,000	11.48
St. Thomas and Principe ..	63,845	177.35	Uruguay	1,662,116	23.04
Seychelles	25,700	164.74	Paraguay	1,000,000	16.22
Ifni	20,000	20.73	Panama Republic	446,098	13.78
Fernando Po, etc.	15,896	19.99	British Guiana	308,308	3.45
St. Helena	3,654	77.74	Dutch Guiana	133,561	2.46
Rio de Oro and Adrar	495	0.01	French Guiana	44,202	1.38
Ascension	250	7.35	Panama Canal Zone	27,143	51.50
			Falkland Islands and South Georgia ..	3,477	0.62
Total	130,466,342	10.51	Total	67,055,012	9.16
NORTH AND CENTRAL AMERICA.			OCEANIA, ETC.		
United States of America ..	112,826,000	37.28	Australia	5,933,503	1.99
Mexico	14,234,799	18.55	New Zealand	1,422,602	13.70
Canada	9,226,740	2.47	Territory of New Guinea ..	400,000	4.40
Cuba	3,142,210	71.17	Papua	276,888	3.06
Haiti	2,031,000	199.04	Hawaii	307,100	47.62
Guatemala	2,004,900	41.52	Dutch New Guinea	195,460	1.22
Salvador	1,527,000	115.89	Fiji	157,266	22.20
Porto Rico	1,299,809	378.40	Solomon Islands (British) ..	150,493	13.68
Santo Domingo	897,405	46.42	New Hebrides	60,000	10.53
Jamaica, including Turks and Caicos Islands, etc. ..	900,273	203.18	Marshall Islands, etc. ..	52,219	54.39
Honduras	673,408	15.21	New Caledonia	57,208	6.69
Nicaragua	638,119	12.35	Western Samoa	38,000	30.40
Costa Rica	498,435	21.67	Gilbert and Ellice Islands ..	36,122	35.73
Trinidad and Tobago	378,184	191.39	Colony	31,655	20.83
Newfoundland and Labrador ..	257,368	1.58	French Oceania	23,759	61.71
Martinique	244,439	634.91	Tonga	15,710	74.81
Guadeloupe and Dependencies ..	229,839	435.81	Guam	8,194	106.42
Windward Islands	168,677	326.89	Samoa (American)	2,000	200.00
Barbados	158,146	952.69	Norfolk Island	717	55.15
Leeward Islands	122,242	170.97	Total	9,168,896	2.65
Alaska	55,036	0.09			
Bahamas	54,886	12.46	SUMMARY.		
Curaçao	56,371	139.88	Europe	465,467,103	120.77
British Honduras	46,527	5.41	Asia	1,013,120,754	63.43
Virgin Islands	26,051	197.36	Africa	130,466,342	10.51
Bermudas	20,127	1,059.32	America, North and Central ..	151,737,264	17.64
Greenland	14,355	0.31	America, South	67,055,012	9.16
St. Pierre et Miquelon	3,918	42.13	Oceania, etc.	9,168,896	2.65
Total	151,737,264	17.64	Total	1,837,015,371	35.58

(a) Number of persons per square mile.

2. Position of the British Empire.—The approximate relationship of the British Empire to the world as a whole in regard to its area and population is given hereunder :—

BRITISH EMPIRE IN RELATION TO THE WORLD.

Particulars.	The World.	British Empire.
Area in square miles (exclusive of Polar Circles)	52,000,000	13,406,000
Population	1,837,000,000	451,000,000
Population per square mile	35.6	33.7

§ 8. General Characteristics.

1. *Sex Distribution.*—(i) *General.* The distribution of the sexes in the populations of young countries shows marked contrasts to that of older countries. In young countries there will be, invariably, a greater number of males than females, whereas in countries which have been long settled there is a reverse tendency. In the older countries the populations have grown almost entirely by the excess of births over deaths, which tends to an equality in the numbers of the sexes. The table on page 914, however, shows that in many instances, this natural tendency has been deflected to an excess of females. This has been due possibly to the following causes—(a) preponderance of males amongst emigrants; (b) greater propensity of males to travel; (c) employment of males away from the home country in the army, navy, and mercantile marine; (d) effects of war. In a young country, on the other hand, the increase in the population is largely brought about by immigration, in which males preponderate. The pioneering conditions of a young country, naturally, are less attractive to females than to males, and in the case of Australia, the disabilities which are inseparable from the early stages of settlement were aggravated by the great distance from the mother country and by the circumstances and methods of colonization, and so accentuated the difference in numbers between the sexes.

Information regarding the sexes of the first settlers in Australia is not available, but on the 31st December, 1796—nearly nine years later—there was an excess of 44 males in every 100 of a total population of 4,100.

The subsequent development of the natural industries of the country attracted male rather than female immigrants, and notwithstanding the equalizing tendency of the expanding factor of natural increase, and notwithstanding also the heavy loss of males through the war, the population of Australia, on the 31st December, 1924, contained an excess of 2.05 males in every 100 persons.

The relation between the degree of the development of a country, and the masculinity of its population, is further exemplified by the existing conditions in the various States of Australia. The table given on page 898 shows that, among the States, the greatest masculinity is associated with the smallest density of population, i.e., the masculinity is greater in the less developed States. For instance, in Queensland, which embraces over 22 per cent. of the area of Australia, but which holds only 14 per cent. of the total population (1.25 persons per sq. mile) the masculinity is 5.43, and in Western Australia, where the density of population is less (0.37 persons per sq. mile), the masculinity is greater (7.29). On the other hand, in Victoria, where the density is greatest (18.86 persons per sq. mile), there is an excess of females of 0.53 per 100 persons. In fact, if either New South Wales or South Australia be excluded, the indexes to masculinity for all the other States will fall in reverse sequence to the indexes to density.

With regard to the density of its population, the position in South Australia is somewhat unusual, inasmuch as the people of that State are concentrated within a relatively small area, while a large portion of the area carries no population. Consequently the condition of the people of South Australia, in this connexion, is governed by the density of that part of it which is populated.

(ii) *Masculinity.* On pages 163 to 165 in the second issue of this publication a table was included showing the masculinity of the population of each of the States for each year from 1796 to 1907. In the fifth issue, on page 123, the figures in this table for the years 1901 to 1907 were modified in accordance with the results of the Census of 3rd April, 1911.

The figures given in the tables last mentioned represent the number of males to each 100 females, but it is considered that a more satisfactory representation of masculinity is obtained by computing the ratio of the excess of males over females to the total population. This ratio, expressed as a percentage, has now been adopted by the Commonwealth Bureau of Census and Statistics as the "masculinity" of the population, and the ratios so computed are given hereunder for intervals of 10 years from 1800 to 1910 and for the five years 1920 to 1924, for Australia and each of its component States and Territories :—

POPULATION.—MASCULINITY, 1800 TO 1924.

(EXCESS OF MALES OVER FEMALES PER 100 OF POPULATION.)

Year.	States.						Territories.		Australia.
	N.S.W.(a)	Victoria.	Q'land.	S.A.(b)	W. Aust.	Tasmania.	North'm (c)	Fed. Cap. (d)	
1800	44.91	..	..	..	..	..	..	..	44.91
1810	31.16	..	..	..	..	..	..	..	31.16
1820	41.81	..	..	..	..	..	..	..	41.81
1830	52.06	..	..	..	49.66	49.17	..	..	51.02
1840	34.25	..	..	13.08	24.10	39.31	..	..	33.72
1850	16.13	..	..	12.72	21.51	28.44	..	..	17.76
1860	13.53	22.74	19.88	2.47	25.07	10.56	..	..	16.72
1870	9.29	9.74	20.10	2.84	23.42	6.09	..	..	9.54
1880	9.28	4.95	17.53	6.69	14.92	5.53	..	..	7.95
1890	8.28	5.06	13.87	4.12	18.98	5.61	..	..	7.43
1900	5.28	0.61	11.24	1.98	22.34	3.83	76.57	..	5.01
1910	4.41	-0.65	8.69	1.54	14.13	2.03	65.89	..	3.79
1920	2.11	-1.33	5.66	-0.08	6.78	0.83	45.95	7.71	1.70
1921	1.92	-1.35	5.41	0.37	6.34	0.80	45.58	9.30	1.60
1922	1.95	-0.82	5.49	0.34	6.74	0.03	43.06	12.87	1.77
1923	2.03	-0.76	5.60	1.13	7.08	0.01	42.17	7.32	1.93
1924	2.09	-0.53	5.43	1.65	7.29	-0.32	41.12	9.61	2.05

(a) Including Federal Capital Territory prior to 1911. (b) Including Northern Territory prior to 1900. (c) Included with South Australia prior to 1900. (d) Part of New South Wales prior to 1911.

NOTE.—The minus sign (—) denotes excess of females over males per 100 of population.

The above table shows clearly the progress towards an equalization of the sexes as the country developed, and conditions suitable to family life became more general.

The effect of the war on the masculinity of the population is very marked. In 1913 there was in Australia as a whole an excess of 4.41 males in every 100 persons, but by 1918 the excess was on the side of females to the extent of 0.96 per 100 persons. This excess of females was experienced in Victoria, South Australia, and Tasmania, but, largely by the return of the military forces, the excess of males was restored in all States except Victoria; subsequent changes, however, have brought about an excess of females over males in Tasmania.

Graphs showing the masculinity of the population of each State and of Australia accompany this chapter.

The difference between young and old countries in the masculinity of their populations is clearly illustrated by the comparisons furnished in the following table, which are based on the latest statistics available. It is interesting to note that of the countries named, Chile is the only non-European country with an excess of females.

POPULATION OF VARIOUS COUNTRIES.—MASCULINITY.

Country.	Year.	Excess of Males over Females in each 100 of Population.	Country.	Year.	Excess of Males over Females in each 100 of Population.
Argentine Republic ..	1918	7.27	Sweden	1924	-1.78
Ceylon	1921	5.91	Italy	1911	-1.81
British India ..	1921	2.73	Jugo-Slavia ..	1921	-1.92
India (Feudatory States)	1921	2.73	Denmark	1921	-2.44
Union of South Africa(a)	1923	2.34	Norway	1920	-2.60
Australia	1924	2.05	Hungary	1921	-2.97
New Zealand ..	1924	2.03	Spain	1920	-3.07
United States of America	1920	1.98	Prussia	1923	-3.34
Ireland	1919	1.08	Poland	1921	-3.37
Japan	1923	1.05	Switzerland ..	1920	-3.69
Rumania	1919	0.75	Scotland	1921	-3.79
Canada	1921	0.31	Austria	1920	-4.24
Bulgaria	1921	0.04	England and Wales	1921	-4.54
Chile	1920	-0.57	German Empire ..	1919	-4.78
Greece	1920	-0.62	Portugal	1920	-5.23
Finland	1923	-1.23	Netherlands ..	1923	-7.29
Belgium	1920	-1.62	Russia (European) ..	1920	-9.56
France	1911	-1.74			

NOTE.—The minus sign (—) denotes excess of females over males in each 100 of population.

(a) White population only.

2. Age Distribution.—(i) *Australia*. The causes which brought about the excess of males also made the age constitution of the population of Australia essentially different from that of older countries. The high birth rate of the earlier years, combined with the low average age of immigrants, produced a population in which young and middle-aged persons were above, and the persons of advanced ages were below, the normal proportions. With time, however, these differences have been modified, so that they are no longer important.

The following table shows the proportions of the population of Australia over a period of 60 years, and of England and Wales over a period of 50 years, in three main groups of ages. The percentages are in all cases based on Census results. The Australian figures for 1861 include the results of the Western Australian Census of 1859, and those for 1871 include the results of the Western Australian and Tasmanian Censuses of 1870. Similar figures for England and Wales for 1921 are not yet available, consequently, as it is probable that the age composition has been affected by the war, comparisons must be confined to the 50 years ended with 1911.

Throughout the period covered by the table, the age distribution of the Australian population has varied considerably in consequence of the fluctuations of the birth-rate and of net migration. The age composition of the separate sexes also shows marked divergences according to the relative numbers of males and females from time to time in the net immigration. The high percentage of males of working age (15–65) in 1861 was due to the large male element amongst immigrants in that period. The net immigration of males—almost entirely of working age—due to the discovery of gold, was particularly heavy during the fifties. The reaction from this rush of immigration, and the consequent departure of many males, caused a marked fall in the proportion of the "15–65" group, and, of course, a corresponding increase in the proportion under 15 years, during the next decade. The effect of this reaction also influenced the female age composition, though to a less extent than that of the males.

The difference between the age composition of the males as compared with that of the females in the earlier years under review is most strikingly indicated by the larger proportion of females under 15 years—43.03 per cent., as against a corresponding proportion of males of 31.41 per cent. in 1861. It has already been shown that in 1860 the population of Australia contained an excess of 16.72 males in every 100 persons in consequence of the larger number of male immigrants, also that the male immigrants were almost entirely of working age; it follows, therefore, that the proportion of males under 15 years would be relatively small as compared with that of females.

It is interesting to note the steady approach to similarity of the age composition of males to that of females in harmony with the equalization of the numbers of each sex in the Australian population, and also the increasing similarity in the composition of the Australian population to that of older countries as represented by England and Wales.

POPULATION.—AGE DISTRIBUTION.

Census Year.	Males.				Females.				Persons.			
	Under 15 Years.	15 and under 65.	65 and over.	Total.	Under 15 Years.	15 and under 65.	65 and over.	Total.	Under 15 Years.	15 and under 65.	65 and over.	Total.
AUSTRALIA, 1861 TO 1921.												
1861..	31.41	67.42	1.17	100	43.03	56.20	0.77	100	36.28	62.72	1.00	100
1871..	38.84	59.11	2.05	100	46.02	52.60	1.38	100	42.09	56.17	1.74	100
1881..	36.37	60.85	2.78	100	41.89	56.07	2.04	100	38.91	58.65	2.44	100
1891..	34.77	62.02	3.21	100	39.36	58.08	2.56	100	36.90	60.20	2.90	100
1901..	33.87	61.82	4.31	100	36.50	59.85	3.65	100	35.12	60.88	4.00	100
1911..	30.84	64.82	4.34	100	32.52	63.28	4.20	100	31.65	64.08	4.27	100
1921..	31.67	63.86	4.47	100	31.80	63.83	4.37	100	31.73	63.85	4.42	100

ENGLAND AND WALES, 1861 AND 1911.

1861..	36.69	58.98	4.33	100	34.62	60.44	4.94	100	35.64	59.72	4.64	100
1911..	31.70	63.66	4.64	100	29.64	64.62	5.74	100	30.63	64.16	5.21	100

(ii) *States and Territories.* The disparity in sex distribution exhibited by the several States is accompanied by a corresponding inequality in the age distribution. For convenient comparison in respect to ages, the several populations may each be divided into groups, indicative of dependence on the one hand, and ability to support on the other. The usual division for this purpose is into an initial group of "under 15" classed as "dependent age," a second group of "15 and under 65" classed as "supporting age," and a final group of "65 and upwards" classed "old age." From certain points of view the division might be into two classes, the "supporting" and the "dependent," as the majority of those aged "65 and upwards" strictly belong to the dependent class. The number of persons in each State and Territory at the Census of 4th April, 1921, in each of the three groups mentioned, and the proportion to the total for each State or Territory and Australia, were as follows:—

POPULATION.—DEPENDENT, SUPPORTING, AND OLD AGE GROUPS,
4th APRIL, 1921.

State or Territory.	Number of Persons of—				Proportion of Population of—		
	Dependent age (under 15).	Supporting age (15 and under 65).	Old age (65 and upwards).	All ages.	Dependent age (under 15).	Supporting age (15 and under 65).	Old age (65 and upwards).
States—					%	%	%
New South Wales	678,364	1,331,673	90,334	2,100,371	32.30	63.40	4.30
Victoria ..	455,936	1,002,093	73,251	1,531,280	29.78	65.44	4.78
Queensland ..	251,586	474,102	30,284	755,972	33.28	62.71	4.01
South Australia	156,636	313,242	25,282	495,160	31.63	63.26	5.11
Western Australia	107,394	214,553	10,785	332,732	32.28	64.48	3.24
Tasmania ..	73,444	130,265	10,071	213,780	34.36	60.93	4.71
Territories—							
Northern ..	804	2,858	205	3,867	20.79	73.91	5.30
Federal Capital	840	1,659	73	2,572	32.66	64.50	2.84
Total ..	1,725,004	3,470,445	240,285	5,435,734	31.73	63.85	4.42

Victoria has the highest proportion of the population in the "supporting" age-group, while Tasmania has the lowest proportion. This high proportion in Victoria is largely due to the relatively low birth-rate in that State during the years which produced the lives under 15 years at the Census of 1921. The relatively small proportion of the population in the age group 15-65 in Tasmania is due to the fact that many Tasmanian natives, in their early adult years, seek the wider opportunities available on the mainland.

The following tables show for the several States and Territories and for Australia as a whole the numbers of males and females and of persons in quinquennial age groups, and also the number of minors and adults recorded at the Census of the 4th April, 1921:—

POPULATION.—IN AGE GROUPS, 4th APRIL, 1921.

(EXCLUSIVE OF FULL-BLOOD ABORIGINES.)

Age last Birthday.	States.						Territories.		Australia.
	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	North- ern.	Fed. Cap.	
MALES.									
0-4 ..	121,529	79,210	46,174	27,597	17,804	12,872	169	167	305,522
5-9 ..	118,284	79,452	43,849	27,763	19,149	12,776	140	160	301,573
10-14 ..	104,166	72,424	38,020	24,184	17,493	11,494	91	131	268,003
15-19 ..	88,476	66,020	33,241	20,841	14,945	10,130	113	190	233,956
20-24 ..	83,333	62,096	33,008	19,467	12,910	8,654	194	168	219,830
25-29 ..	87,361	62,845	33,525	20,232	12,295	7,907	235	125	224,525
30-34 ..	92,215	59,244	33,053	20,822	12,258	7,617	271	133	226,883
35-39 ..	79,737	50,696	26,085	18,404	12,257	6,875	181	121	196,356
40-44 ..	66,785	44,885	23,875	14,987	12,703	6,014	209	104	169,562
45-49 ..	54,723	39,556	20,022	12,060	12,361	5,157	222	83	144,184
50-54 ..	49,235	40,174	18,572	11,215	11,108	4,947	268	44	135,563
55-59 ..	41,377	35,923	15,844	9,266	8,281	4,383	255	47	115,878
60-64 ..	33,694	26,660	12,330	8,219	5,526	3,584	220	43	90,276
65-69 ..	21,737	15,054	7,918	5,673	3,020	2,331	121	26	55,880
70-74 ..	13,030	9,035	4,688	3,376	1,663	1,380	51	9	33,232
75-79 ..	7,698	5,415	2,748	2,047	859	737	11	11	19,526
80-84 ..	3,402	2,991	1,465	936	367	385	2	1	9,549
85-89 ..	1,251	1,336	432	333	125	142	1	3	3,623
90 and over ..	329	413	125	93	30	40	..	1	1,031
Unspecified ..	2,639	1,295	1,395	752	1,454	318	67	..	7,920
Total ..	1,071,501	754,724	398,969	248,267	177,278	107,743	2,821	1,567	2,762,870
Under 21 ..	449,943	310,250	168,068	104,474	72,346	49,192	550	703	1,155,526
21 and over ..	618,919	443,179	229,506	143,041	103,478	58,233	2,204	864	1,599,424
Unspecified ..	2,639	1,295	1,395	752	1,454	318	67	..	7,920
Total ..	1,071,501	754,724	398,969	248,267	177,278	107,743	2,821	1,567	2,762,870
FEMALES.									
0-4 ..	117,811	76,426	43,974	26,305	17,173	12,674	162	159	294,684
5-9 ..	115,140	77,680	42,806	27,035	18,735	12,507	149	133	294,185
10-14 ..	101,434	70,744	36,763	23,752	17,040	11,121	93	90	261,037
15-19 ..	88,702	64,589	32,229	20,342	14,723	9,721	83	83	228,472
20-24 ..	88,753	67,503	33,309	20,771	12,859	9,118	91	77	232,481
25-29 ..	91,155	69,647	32,203	22,076	12,134	8,794	94	90	236,193
30-34 ..	88,157	63,439	29,205	20,439	11,368	7,945	74	105	220,732
35-39 ..	75,886	53,790	23,622	18,306	10,665	6,862	77	73	189,281
40-44 ..	62,275	47,914	19,446	14,893	10,182	5,844	53	47	160,654
45-49 ..	50,727	42,378	16,171	11,921	9,116	4,791	29	40	135,173
50-54 ..	42,587	40,391	13,941	10,881	7,336	4,300	27	30	119,403
55-59 ..	35,034	34,841	11,077	9,316	5,082	3,800	18	38	90,206
60-64 ..	28,411	27,016	8,595	7,655	3,441	3,283	9	18	78,428
65-69 ..	18,131	15,717	5,371	5,308	2,102	2,077	7	11	48,724
70-74 ..	12,017	10,204	3,464	3,414	1,292	1,317	2	4	31,714
75-79 ..	7,430	6,826	2,292	2,164	746	884	1	4	20,347
80-84 ..	3,367	3,831	1,145	1,164	317	502	1	3	10,330
85-89 ..	1,297	1,672	408	524	123	183	1	..	4,208
90 and over ..	335	575	89	159	23	51	..	..	1,232
Unspecified ..	2,221	1,373	893	468	997	263	75	..	6,290
Total ..	1,028,870	776,556	357,003	246,893	155,454	106,037	1,046	1,005	2,672,864
Under 21 ..	439,139	303,204	162,488	101,596	70,455	47,989	510	480	1,125,861
21 and over ..	587,510	471,979	193,622	144,829	84,002	57,785	461	525	1,540,713
Unspecified ..	2,221	1,373	893	468	997	263	75	..	6,290
Total ..	1,028,870	776,556	357,003	246,893	155,454	106,037	1,046	1,005	2,672,864

POPULATION.—IN AGE GROUPS, 4TH APRIL, 1921—*continued*.
(Exclusive of Full-blood Aborigines.)

Age last Birthday.	States.						Territories.		Australia.
	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	North- ern.	Fed.Cap.	
PERSONS.									
0- 4 ..	239,340	155,636	90,148	53,902	34,977	25,546	331	326	600,206
5- 9 ..	233,424	157,132	86,655	54,798	37,884	25,283	289	293	595,758
10-14 ..	205,600	143,168	74,783	47,936	34,533	22,615	184	221	529,040
15-19 ..	175,178	130,609	65,470	41,183	29,668	19,851	196	273	462,428
20-24 ..	172,086	129,599	66,317	40,238	25,769	17,772	285	245	452,311
25-29 ..	178,516	132,492	65,728	42,308	24,429	16,701	329	215	460,718
30-34 ..	180,372	122,683	62,858	41,261	24,296	15,562	345	238	447,615
35-39 ..	155,623	104,486	51,707	36,710	22,922	13,737	258	194	385,637
40-44 ..	129,060	92,799	43,321	29,880	22,885	11,858	262	151	330,216
45-49 ..	105,450	81,934	36,193	23,981	21,477	9,948	251	123	279,357
50-54 ..	91,822	80,565	32,513	22,096	18,444	9,247	295	74	255,056
55-59 ..	76,911	70,764	26,921	18,582	13,363	8,183	273	85	215,082
60-64 ..	62,105	53,676	20,925	15,874	8,967	6,867	229	61	168,704
65-69 ..	39,868	30,771	13,289	10,981	5,122	4,408	128	37	104,604
70-74 ..	25,047	19,239	8,152	6,790	2,955	2,697	53	13	64,946
75-79 ..	15,128	12,241	5,040	4,211	1,605	1,621	12	15	39,873
80-84 ..	6,769	6,822	2,610	2,100	684	887	3	4	19,879
85-89 ..	2,548	3,008	840	857	248	325	2	3	7,831
90 and over	664	988	214	252	53	91	..	1	2,263
Unspecified	4,860	2,668	2,288	1,220	2,451	581	142	..	14,210
Total ..	2,100,371	1,531,280	755,972	495,160	332,732	213,780	3,867	2,572	5,435,734
Under 21 ..	889,082	613,454	330,556	206,070	142,801	97,181	1,060	1,183	2,281,387
21 and over	1,206,429	915,158	423,128	287,870	187,480	116,018	2,665	1,389	3,140,137
Unspecified	4,860	2,668	2,288	1,220	2,451	581	142	..	14,210
Total ..	2,100,371	1,531,280	755,972	495,160	332,732	213,780	3,867	2,572	5,435,734

3. *Race and Nationality.*—(i) *General.* With regard to its racial characteristics, the population of Australia may be divided into two main groups, one comprising the aboriginal natives, and the other consisting of the various immigrant races which have made the country their home. [It will of course be understood that full-blood aborigines are not counted in the population.] The term "immigrant races," naturally, covers not only those residents of Australia who were born in other countries, but also their descendants who were born in Australia.

(ii) *Aborigines.* (a) *Early Estimates of Numbers.* The number of aborigines in Australia at the advent of the white race has been estimated by various observers at somewhere in the vicinity of 150,000, but this figure must be regarded as a very rough approximation only.

(b) *Various Estimates from 1826 to 1921.* In 1826 the native black population in the settled districts of New South Wales numbered 3,019, this figure, however, offering little indication of the total for the whole State.

In Victoria an enumeration of the aborigines in the settled districts in 1861 gave a total of 2,384, while at the Census of 1871 1,330 were enumerated. In New South Wales 983 were counted in 1871 who were more or less in contact with white settlers, and it was estimated that 12,000 others were living in a wild and wandering condition.

At the Census of 1881 the aborigines recorded in Victoria had dwindled to 780. In New South Wales the number enumerated was 1,643, while the unenumerated were estimated at 10,000. In South Australia (exclusive of the Northern Territory) the number counted and estimated was 6,346. In Queensland officers of the Police Department supplied an estimate of 20,585.

At the Census of 1891 the number in Victoria had decreased to 317. In New South Wales, where the first complete enumeration of the blacks was made, the number was returned as 5,097. In Western Australia 5,670 were enumerated, this figure, however, excluding natives not in contact with white settlers.

At the Census of 1911, 19,939 aboriginals were recorded for the whole of Australia, the figure again being exclusive of natives in unsettled areas.

At the Census of 1921 special efforts were made to obtain a reliable indication of the number of aboriginals living in the various States, including wild and wandering natives, as well as those in contact with the whites. Great difficulty was experienced in gaining anything like a reliable estimate in regard to the numbers of those in a wild state in Western Australia, the Northern Territory, and even Queensland. The estimates gave a total of 60,300, distributed as follows:—New South Wales, 1,597; Victoria, 144; Queensland, 14,014; South Australia, 1,609; Western Australia, 25,587; Northern Territory, 17,349. (It may be mentioned here that the last representative of the Tasmanian aboriginals died in 1876.)

(c) *Census of Aboriginals in 1924.* A census of the aboriginal population taken in 1924 gave the following results:—

CENSUS OF ABORIGINALS, 1924.

State.	Full Bloods.					Half Castes.				
	Adults.		Children.		Total.	Adults.		Children.		Total.
	M.	F.	M.	F.		M.	F.	M.	F.	
New South Wales ..	550	309	125	100	1,084	1,799	1,446	1,072	1,070	5,387
Victoria ..	32	26	11	5	74	172	105	99	59	435
Queensland ..	6,709	4,861	1,897	1,608	15,075	906	718	639	576	2,839
South Australia ..	1,603	1,620	354	364	3,941	385	328	218	235	1,166
Western Australia ..	5,869	5,034	688	669	22,260 ^a	589	505	345	329	1,768
Northern Territory ..	8,471	6,594	2,712	2,204	19,981	181	178	153	195	707
Total ..	23,234	18,444	5,787	4,950	62,415	4,032	3,280	2,526	2,464	12,302

(a) Including 10,000 estimated as living outside the influence of Europeans.

NOTE.—In the case of aboriginals all those twelve years of age and over are counted as adults, and the balance as children.

The figures for 1924 show a small increase over the total for 1921, but this increase is more apparent than real, and is due to underestimation in 1921 of the numbers of the wild and unapproachable natives. In South Australia, for example, tribes previously unknown have been found living west of Oodnadatta, near the boundary of Western Australia. Except in a few places where the blacks are under missionary influence, the numbers generally tend to decline, and the figures for New South Wales and Victoria, which are probably the most reliable, certainly evidence a rapid decline since the foundation of white settlement.

(d) *Decline in Numbers since 1891.* As evidence of the decline alluded to in the previous sub-section, a table is appended showing the numbers in the States of New South Wales and Victoria from 1891 onwards.

NEW SOUTH WALES AND VICTORIA.—FULL-BLOOD ABORIGINALS, 1891 TO 1924.

State.	1891.	1901.	1911.	1921.	1924.
New South Wales ..	5,097	3,778	2,012	1,597	1,084
Victoria ..	317	250	196	144	74

The figures refer to full-blood aboriginals actually enumerated at the dates mentioned.

(iii) *Immigrant Races.* The immigrant races consist mainly of natives of the British Isles and their descendants. Of the total population (5,435,734) enumerated at the Census of 1921, 5,387,143, or over 99 per cent., were of European race. Of the remainder, 30,975 were full-blood, and 17,616 were half-caste non-Europeans.

It may be well to mention here that the Census figures include all persons on board ships which were in Australian waters on the night of the Census. There were on board these ships 4,576 persons of full-blood, and 49 half-castes of non-European race. Included in the 4,576 full-bloods were 1,018 Chinese, 1,330 Japanese, 942 Hindus, and 623 Malays.

The following table shows the number of full-blood and half-caste persons of non-European race—according to continental divisions—who were included in the Census of 1921. Of the 28,087 full-blood Asiatics, 17,157 were Chinese, 2,881 Hindus, 2,892 Syrians, 2,740 Japanese, and 1,087 Malays. The number of full-blood non-Europeans enumerated at the Census of 1921 was less than in 1911 by 6,814, or 18.03 per cent., whereas the half-caste non-Europeans had increased by 3,062, or 21.03 per cent. During the intercensal period the number of full-blood Chinese declined by 5,596, Japanese by 749, and Hindus by 418. It may be noticed that the non-European element is relatively strongest in those parts of Australia where there are *bêche-de-mer* and pearl fisheries. More detailed information relating to the non-European races in the Australian population may be found in the Census Bulletins and Parts.

POPULATION.—NON-EUROPEAN RACES, CENSUS, 4th APRIL, 1921.

(EXCLUSIVE OF FULL-BLOOD ABORIGINALS.)

States and Territories.	Aus- tralian.	Asiatic.		African.		American.		Polynesian.		Indefinite.		Total.	
	Half-caste Aboriginals.	Full-blood.	Half-caste.	Full-blood.	Half-caste.	Full-blood.	Half-caste.	Full-blood.	Half-caste.	Full-blood.	Half-caste.	Full-blood.	Half-caste.
States—													
N.S. Wales ..	4,588	10,608	2,081	72	116	31	35	332	162	38	7	11,081	6,989
Victoria ..	442	4,292	1,255	15	40	8	19	8	8	23	1	4,346	1,765
Queensland ..	3,090	7,122	1,453	42	27	25	21	1,869	247	155	6	9,213	4,844
S. Australia ..	811	1,210	224	13	5	17	4	..	2	56	2	1,296	1,048
W. Australia ..	1,960	3,734	242	13	7	14	7	10	4	3	3	3,774	2,223
Tasmania ..	152	327	78	1	..	..	..	..	2	1	..	329	232
Territories—													
Northern ..	460	913	21	3	..	..	..	7	1	4	..	927	482
Federal Capital	33	9	..	..	..	..	..	..	..	..	..	9	33
Total ..	11,526	28,215	5,354	159	195	95	86	2,226	426	280	19	30,975	17,616

The proportion of population of non-European race (exclusive of full-blood aboriginals) in each State and Territory is shown in the following table, full-blood and half-caste non-Europeans being shown separately:—

POPULATION.—NON-EUROPEAN RACES, PROPORTIONS, CENSUS, 4th APRIL, 1921.

(EXCLUSIVE OF FULL-BLOOD ABORIGINALS.)

States and Territories.	Total Population.	Non-European Race.					
		Full-blood.		Half-caste.		Total.	
		Number.	Number per 1,000 of Total Population.	Number.	Number per 1,000 of Total Population.	Number.	Number per 1,000 of Total Population.
States—							
N.S. Wales ..	2,100,371	11,081	5.27	6,989	3.33	18,070	8.60
Victoria ..	1,531,280	4,346	2.84	1,765	1.15	6,111	3.99
Queensland ..	755,972	9,213	12.19	4,844	6.41	14,057	18.60
S. Australia ..	495,160	1,296	2.62	1,048	2.11	2,344	4.73
W. Australia ..	332,732	3,774	11.34	2,223	6.67	5,997	18.01
Tasmania ..	213,780	329	1.54	232	1.09	561	2.63
Territories—							
Northern ..	3,867	927	239.70	482	124.64	1,409	364.34
Fed. Capital	2,572	9	3.50	33	12.83	42	16.33
Total ..	5,435,734	30,975	5.70	17,616	3.24	48,591	8.94

(iv) *Biological and Sociological Significance.* The population of Australia is fundamentally British in race and nationality, and furnishes an example of the transplanting of a race into conditions greatly different from those in which it had been developed. The biological and sociological significance of this will ultimately appear in the physical and moral constitution produced by the complete change of climatic and social environment. The new conditions are likely to considerably modify both the physical characteristics and the social instincts of the constituents of the population. At present, the characteristics of the Australian population, whether physical, mental, moral, or social, are only in the making, and probably a distinct Australian type will not appear until three or four generations more have passed. Even then, it is probable that, with the great extent of territory and varying conditions presented there will be a number of types varying with locality. At present the Australian is little more than a transplanted Briton, with the essential characteristics of his British forbears, with perhaps some accentuation of the desire for freedom from restraint. The greater opportunity for an open-air life, and the absence of the restricting conventions of older countries, may be mainly responsible for this development.

(v) *Nationality.* Prior to the Census of 1921 no attempt had been made to ascertain the allegiance of the people, except in so far as a person was or was not a British subject. At the last Census all persons were asked to state their nationality, and the results which are given in the following table, show that of a total population of 5,435,734, as many as 5,387,205, or over 99 per cent., were definitely stated to be British subjects. Of the foreign element, the Chinese are the most numerous, representing 30 per cent. of the foreign people and 2.56 in every 1,000 of the total population.

**POPULATION.—NATIONALITY (ALLEGIANCE), AUSTRALIA, CENSUS,
4th APRIL, 1921.**

(EXCLUSIVE OF FULL-BLOOD ABORIGINALS.)

Nationality.	4th April, 1921.			Nationality.	4th April, 1921.		
	Males.	Females.	Persons.		Males.	Females.	Persons.
British	2,722,152	2,665,053	5,387,205	Foreign—continued.			
Foreign—				Jugo-Slavian ..	502	107	609
Austrian	217	40	257	Norwegian ..	980	65	1,025
Belgian	171	106	277	Polish	351	149	500
Bulgarian ..	56	10	66	Russian	1,655	662	2,317
Chinese	13,614	185	13,799	Spanish	405	140	545
Czecho-Slovakian	97	22	119	Swedish	1,399	80	1,479
Danish	956	260	1,216	Swiss	413	151	564
Dutch	1,430	187	1,617	Turkish	72	26	98
Finnish	517	37	554	U.S. of America ..	2,520	737	3,257
French	1,221	867	2,088	Other	1,042	376	1,418
German	2,538	1,017	3,555	Total Foreign ..	39,067	6,687	45,754
Greek	2,430	387	2,817	Not stated ..	1,651	1,124	2,775
Hungarian ..	28	7	35	Grand Total ..	2,762,870	2,672,864	5,435,734
Italian	3,984	919	4,903				
Japanese ..	2,489	150	2,639				

(vi) *Birthplaces.* The proportion of native-born in the Australian population has increased rapidly in recent years. At the Census of 1921 the Australian-born numbered 4,581,663 persons, or 84.51 per cent. of a total population of 5,421,242 persons whose birthplaces were specified. Of the remainder, 676,387, or 12.48 per cent., were natives of the British Isles, and 38,611, or 0.71 per cent., were natives of New Zealand, so that 97.70 of the total population at that time had been born either in Australasia or in the British Isles. Excluding these, the following countries are the most important recorded as the birthplaces of persons in Australia at the Census of 1921 :—

Germany, 22,396 (0.41 per cent.); China, 15,224 (0.28 per cent.); Scandinavia (comprising Sweden, Norway, and Denmark), 14,341 (0.26 per cent.); Italy, 8,135 (0.15 per cent.); British India, 6,918 (0.13 per cent.); United States of America, 6,604 (0.12 per cent.); Union of South Africa, 5,403 (0.10 per cent.); Canada, 3,550 (0.07 per cent.).

The Australian-born element is lowest in Western Australia and Queensland, where the density of population is also least, but where the masculinity is greatest. On the other hand, in Tasmania, where the density is high and the masculinity is low, the proportion of Australian-born is highest. These related facts indicate that conditions throughout these territorially larger but less developed States hitherto have been, on the whole, less attractive to women and less conducive to the rearing of families than the conditions existing in the more settled States.

Information in greater detail respecting birthplaces will be found in Bulletins and other matter published in connexion with the Census of 1921.

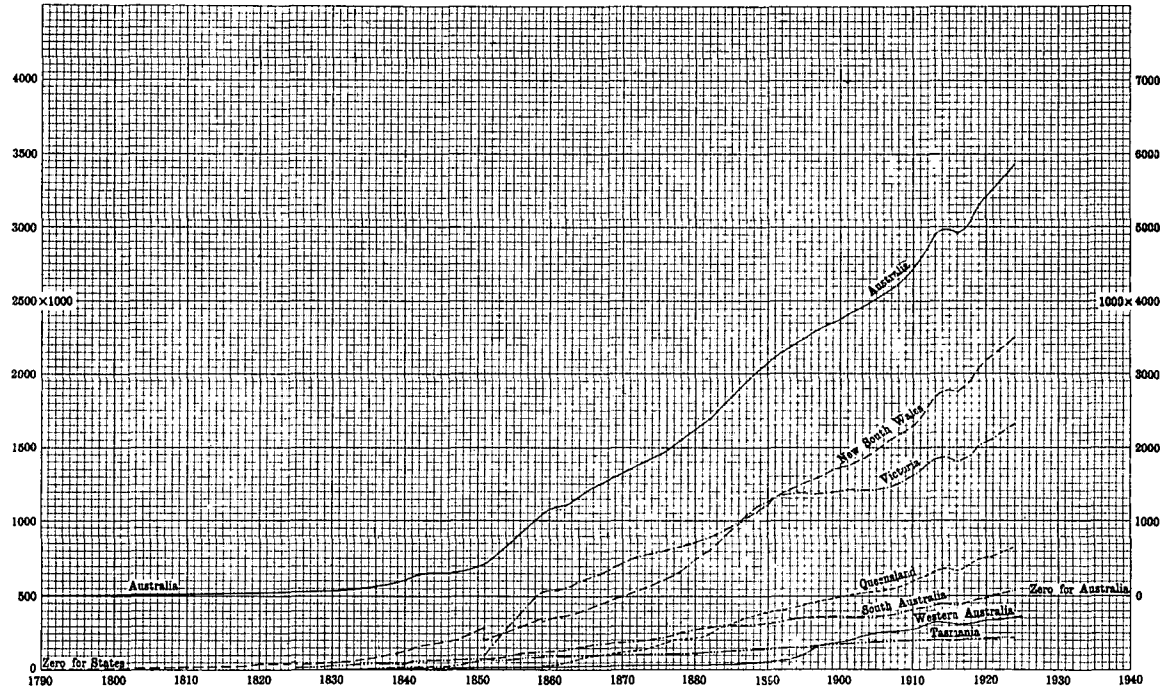
POPULATION.—BIRTHPLACES AT CENSUS OF 1921.

(EXCLUSIVE OF FULL-BLOOD ABORIGINALS.)

Birthplace.	States.						Territories.		Australia.
	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	North-ern.	Fed. Cap.	
MALES.									
Australia ..	880,892	646,023	303,654	215,630	126,794	98,102	1,654	1,250	2,273,999
New Zealand ..	9,913	5,460	1,827	630	1,445	672	36	19	20,002
British Isles ..	145,966	83,712	70,171	24,513	37,539	6,909	337	261	369,408
Other European Countries ..	15,212	9,765	13,137	4,674	5,746	679	132	12	49,357
Asia ..	9,586	4,246	6,237	1,273	3,039	475	607	13	26,376
Africa ..	1,500	999	426	249	313	94	7	2	3,590
America ..	3,388	1,800	1,181	486	647	173	27	5	7,707
Polynesia (a) ..	957	174	1,044	40	52	28	7	4	2,306
At Sea ..	675	524	321	187	115	46	3	1	1,872
Unspecified ..	3,412	2,021	971	585	688	565	11	..	8,253
Total ..	1,071,501	754,724	398,969	248,267	177,278	107,743	2,821	1,567	2,762,870
FEMALES.									
Australia ..	891,722	684,113	288,509	221,361	122,072	98,143	882	862	2,307,664
New Zealand ..	9,353	5,750	1,122	588	1,095	688	5	8	18,609
British Isles ..	114,460	77,405	58,063	21,813	29,200	5,841	73	124	306,979
Other European Countries ..	4,736	3,501	6,927	1,697	1,510	272	36	6	18,685
Asia ..	1,450	972	508	245	471	236	31	3	3,916
Africa ..	1,289	1,005	315	224	264	98	9	1	3,185
America ..	1,856	1,222	582	268	324	106	7	..	4,365
Polynesia (a) ..	925	180	174	42	33	30	1	1	1,886
At Sea ..	608	587	268	207	119	46	1	..	1,836
Unspecified ..	2,491	1,821	535	448	366	577	1	..	6,239
Total ..	1,028,870	776,556	357,003	246,893	155,454	106,037	1,046	1,005	2,672,864
PERSONS.									
Australia ..	1,772,614	1,330,136	592,163	436,991	248,866	196,245	2,536	2,112	4,581,663
New Zealand ..	19,266	11,210	2,949	1,218	2,540	1,360	41	27	38,611
British Isles ..	260,426	161,117	128,234	46,326	66,739	12,750	410	385	676,387
Other European Countries ..	19,948	13,266	20,064	6,371	7,256	951	168	18	68,042
Asia ..	11,036	5,218	6,745	1,518	4,410	711	638	16	30,292
Africa ..	2,769	2,004	741	473	577	192	16	3	6,775
America ..	5,244	3,022	1,763	754	971	279	34	5	12,072
Polynesia (a) ..	1,882	354	1,218	82	85	58	8	5	3,692
At Sea ..	1,283	1,111	589	394	234	92	4	1	3,708
Unspecified ..	5,903	3,842	1,506	1,033	1,054	1,142	12	..	14,492
Total ..	2,100,371	1,531,280	755,972	495,160	332,732	213,780	3,867	2,572	5,435,734

(a) Includes Norfolk Island, Papua, and the Territory of New Guinea.

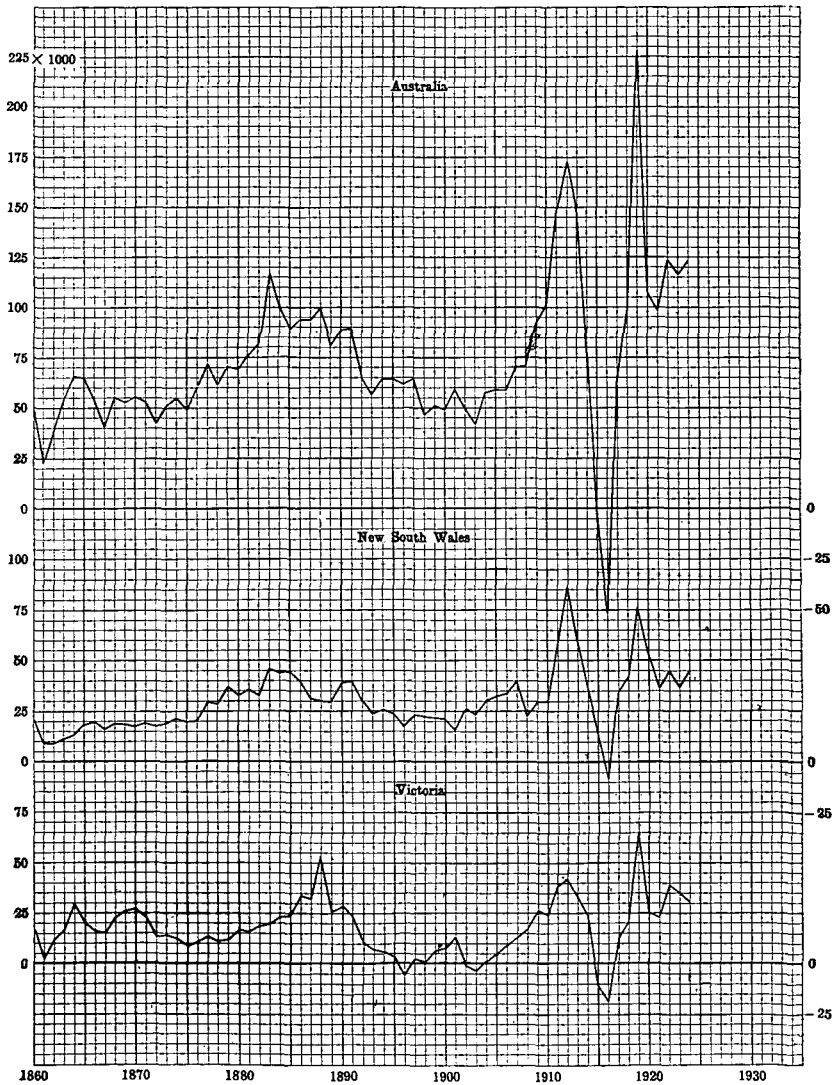
TOTAL POPULATION, 1788 TO 1924.



EXPLANATION. The base of each small square represents one year's interval for the States and Australia, and the vertical height for the States 50,000 persons, and for Australia 100,000 persons.

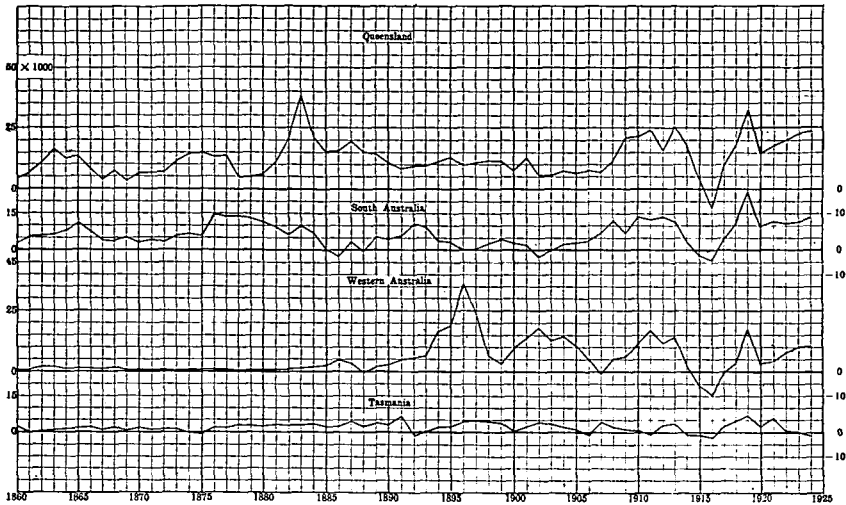
Where the population falls suddenly, the fall denotes the creation of a new colony, *e.g.*, New South Wales in 1825 lost the whole population of Tasmania.

TOTAL INCREASE OF POPULATION—AUSTRALIA, AND NEW SOUTH WALES AND
VICTORIA, 1860 TO 1924.



(For explanation see next page.)

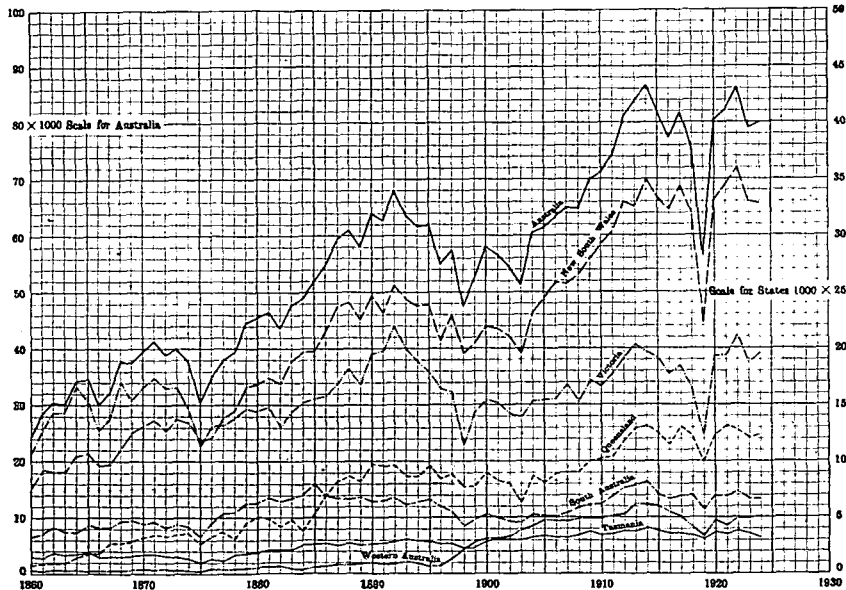
**TOTAL INCREASE OF POPULATION.—QUEENSLAND, SOUTH AUSTRALIA, WESTERN AUSTRALIA
AND TASMANIA, 1860 TO 1924.**



EXPLANATION.—The base of each small square represents an interval of a year for both States and Australia; the vertical height represents 5,000 persons. In the first graph (on page 924) three zero lines are taken (i) for Australia, (ii) for New South Wales, and (iii) for Victoria. In the second graph four zero lines are taken (i) for Queensland, (ii) for South Australia, (iii) for Western Australia, and (iv) for Tasmania.

DECREASES in population are shown by carrying the curve in such cases below the zero line, the distance below the zero line indicating the extent of the decrease. The scales in these instances are on the right hand side of the graph.

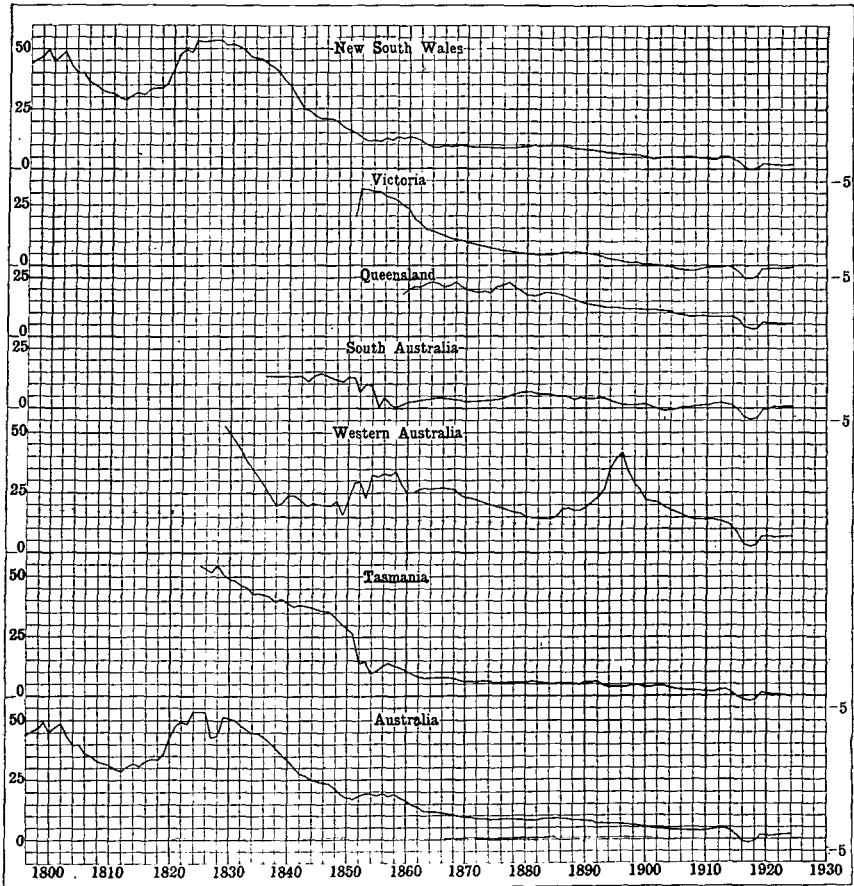
NATURAL INCREASE OF POPULATION, 1860 TO 1924.



EXPLANATION.—The base of each small square represents one year for both States and Australia, and the vertical height 1,000 persons for the States and 2,000 persons for Australia.

The distances upward from the zero line, marked 0 for both Australia and States, denote the excess of births over deaths. The scale on the left relates to Australia, and that on the right to the States.

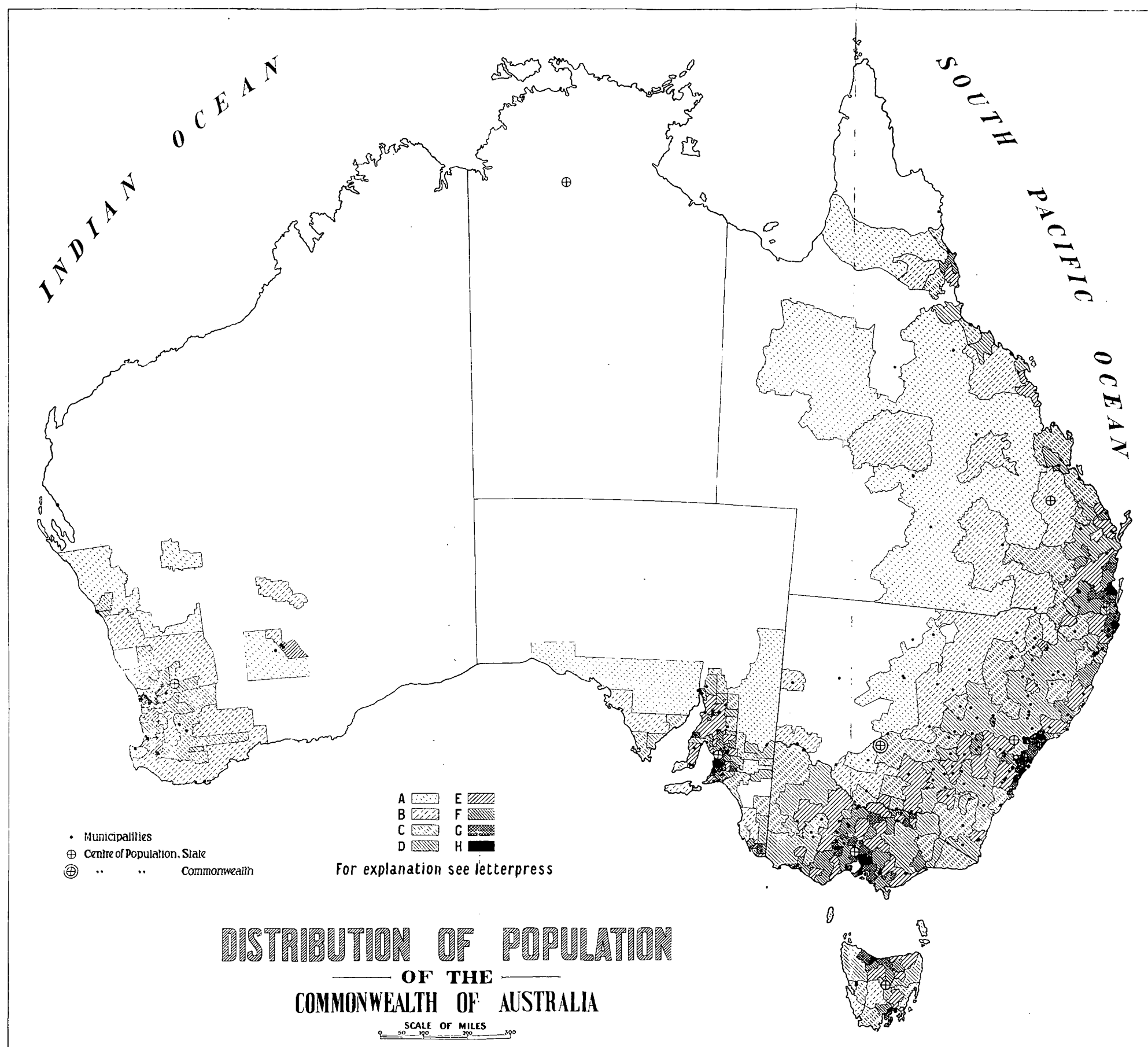
MASCULINITY OF POPULATION—1796 TO 1924.



EXPLANATION.—The base of each small square represents an interval of two years, and the vertical height an excess of five males per 100 of the population. The basic lines (shown thickened) for Australia and all the States are at zero, equivalent to a numerical equality of the sexes.

It will be noticed that in the case of Australia in the years 1916, 1917, and 1918, Victoria in the years 1903 to 1924, South Australia in the years 1902 to 1904 and 1915 to 1920, and Tasmania for the years 1915 to 1918, the curves are below the zero line, thus showing an excess of females over males.

DISTRIBUTION OF POPULATION OF AUSTRALIA ACCORDING TO CENSUS OF 1921



The above map furnishes a graphic representation of the distribution of the population of Australia at the date of the Census of 1921. For this purpose the density of the population has been computed for the Local Government areas in each State, and the areas represented have been shaded in accordance with the following scale of density:—

[NOTE.—In the portions left blank the population is less than 1 per 8 sq. miles.]

A—	From 1 inhabitant in 8 sq. miles to less than 1 in 4 sq. miles
B—	1 " " 4 " " 1 in 1 sq. mile
C—	1 " " 1 sq. mile " 2 in 1 "
D—	2 inhabitants in 1 " " 4 in 1 "
E—	4 " " 1 " " 8 in 1 "
F—	8 " " 1 " " 16 in 1 "
G—	16 " " 1 " " 32 in 1 "
H—	32 inhabitants and upwards in 1 sq. mile

The cross within the concentric circles, the centre of which is practically on the longitude of Melbourne and the latitude of Sydney, represents the "centre of gravity" of the population of Australia, and the cross within the single circle in each State represents the "centre of gravity" of the population of such State.

POPULATION.—BIRTHPLACES AT CENSUS OF 1921—*continued.*

Birthplace.	States.						Territories.		Australia.
	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	North- era.	Fed. Cap.	
PERCENTAGE OF TOTAL POPULATION.									
Australia ..	84.64	87.08	78.49	88.44	75.03	92.29	65.78	82.12	84.51
New Zealand ..	0.92	0.74	0.39	0.25	0.77	0.64	1.06	1.05	0.71
British Isles ..	12.43	10.55	17.00	9.37	20.12	6.00	10.64	14.97	12.48
Other European Countries ..	0.95	0.87	2.66	1.29	2.19	0.45	4.36	0.70	1.26
Asia ..	0.53	0.34	0.89	0.31	1.33	0.33	16.55	0.62	0.56
Africa ..	0.13	0.13	0.10	0.09	0.17	0.09	0.42	0.12	0.12
America ..	0.25	0.20	0.23	0.15	0.29	0.13	0.63	0.10	0.22
Polynesia (a) ..	0.09	0.02	0.16	0.02	0.03	0.03	0.21	0.19	0.07
At Sea ..	0.06	0.07	0.08	0.08	0.07	0.04	0.10	0.04	0.07
Total ..	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

(a) Includes Norfolk Island, Papua, and the Territory of New Guinea.

(vii) *Length of Residence of Immigrants.* At the Census of 1921 the population of Australia included 839,579 persons who were definitely shown to be immigrants, and the following table shows the number of years during which these people have resided in Australia. The number of persons whose length of residence is shown as less than one year is necessarily large, as it includes many persons, such as the crews of oversea ships, travellers, and others, who did not intend to remain in the country. The variations in the numbers with different periods of residence show the fluctuations in the volume of immigration. Thus the figures for length of residence groups 5-9 years and 10-14 years include those persons who arrived in Australia during the years 1911-1913 when immigration was large, those for the groups 30-44 years represent the arrivals during the boom period of the eighties of last century, while those for the groups 65-74 represent the survivors of the gold rush of the fifties.

POPULATION.—IMMIGRANT, LENGTH OF RESIDENCE IN AUSTRALIA, CENSUS, 4th APRIL, 1921.

Number of Completed Years of Residence.	Males.	Females.	Persons.	Number of Completed Years of Residence.	Males.	Females.	Persons.
0 ..	23,386	19,827	43,213	60-64 ..	10,372	11,671	22,043
1 ..	8,375	16,998	25,373	65-69 ..	11,378	13,594	24,972
2 ..	2,026	2,490	4,516	70-74 ..	2,875	3,669	6,544
3 ..	1,715	1,404	3,119	75-79 ..	716	935	1,651
4 ..	2,779	2,623	5,402	80-84 ..	519	693	1,212
5-9 ..	111,895	87,723	199,618	85-89 ..	78	124	202
10-14 ..	58,919	31,883	90,802	90-94 ..	16	15	31
15-19 ..	15,077	7,818	22,895	95 and upwards ..	1	—	1
20-24 ..	18,875	8,990	27,865	Not stated ..	13,903	12,050	25,953
25-29 ..	16,873	10,721	27,594	Total ..	480,618	358,961	839,579
30-34 ..	47,206	32,273	79,479	Born in Australia ..	2,273,999	2,307,664	4,581,663
35-39 ..	56,144	38,272	94,416	Birthplace not stated ..	8,253	6,239	14,492
40-44 ..	31,843	20,851	52,694	Total Population ..	2,762,870	2,672,864	5,435,734
45-49 ..	16,616	11,776	28,392				
50-54 ..	10,954	9,649	20,603				
55-59 ..	13,077	12,912	25,989				

Further details are available from the Bulletins and Parts published in connexion with the Census of 1921.

4. *Education.*—(i) *General.* The information concerning educational attainments which can be satisfactorily collected at a Census is necessarily meagre. In Australia the particulars ascertained have never amounted to more than a statement as to whether or not a person could read and write. The results, therefore, merely divide the population into three main groups, viz. :—(a) Those who cannot read; (b) those who can read but cannot write; and (c) those able to read and write. Of the 5,435,734 persons who

comprised the population of Australia on the 4th April, 1921, there were 805,798 who were definitely shown to be unable to read, and there were 86,641 persons whose ability in this direction was not stated. Thus, approximately 15 per cent. of the population were unable to read. Of the 805,799 persons returned as unable to read, 600,206, or 74.5 per cent., were under five years of age, and many of the remaining 25.5 per cent. were also children. Allowing for those persons whose ability to read and write was unspecified, it may be said that over 95 per cent. of the population over five years of age can read and write, and of those over ten years of age more than 98 per cent. can read and write. The number of persons returned at the Census of 1921 as able to read but unable to write was 14,493, of whom 943 could read a foreign language only. With the exception of New Zealand, there is probably no country in the world so strikingly unilingual as Australia.

POPULATION.—EDUCATION, CENSUS OF 4th APRIL, 1921.

(EXCLUSIVE OF FULL-BLOOD ABORIGINALS.)

States and Territories.	English Language.		Foreign Language only.		Cannot Read.		Un-specified	Australia.
	Read and Write.	Read only.	Read and Write.	Read only.	Under age 5 years.	Age 5 years and over.		
MALES.								
STATES—								
New South Wales ..	875,514	2,676	3,595	218	121,529	51,302	16,667	1,071,501
Victoria ..	640,769	1,229	2,134	124	79,210	21,467	9,791	754,724
Queensland ..	325,382	1,289	3,512	162	46,174	16,810	5,640	398,969
South Australia ..	204,478	648	810	38	27,597	9,956	4,740	248,267
Western Australia ..	144,572	433	2,181	38	17,804	7,516	4,734	177,278
Tasmania ..	85,059	292	108	4	12,872	6,962	2,446	107,743
TERRITORIES—								
Northern ..	1,774	6	289	2	169	473	108	2,821
Federal Capital ..	1,292	5	7	..	167	89	7	1,567
Total ..	2,278,840	6,578	12,636	586	305,522	114,575	44,133	2,762,870
FEMALES.								
STATES—								
New South Wales ..	849,812	2,615	595	78	117,811	41,556	16,403	1,028,870
Victoria ..	668,565	1,609	424	106	76,426	18,504	10,922	776,556
Queensland ..	294,065	1,332	990	126	43,974	12,087	4,429	357,003
South Australia ..	206,778	828	220	26	26,305	8,090	4,646	246,893
Western Australia ..	128,507	310	304	19	17,173	5,708	3,433	155,454
Tasmania ..	85,684	274	12	1	12,674	4,834	2,558	106,037
TERRITORIES—								
Northern ..	557	1	36	1	162	184	105	1,046
Federal Capital ..	777	3	..	..	159	54	12	1,005
Total ..	2,234,745	6,972	2,581	357	294,084	91,017	42,508	2,672,864
PERSONS.								
STATES—								
New South Wales ..	1,725,326	5,291	4,190	296	239,340	92,858	33,070	2,100,371
Victoria ..	1,309,334	2,838	2,558	230	155,636	39,971	20,713	1,531,280
Queensland ..	619,447	2,621	4,502	288	90,148	28,897	10,069	755,972
South Australia ..	411,256	1,476	1,030	64	53,902	18,046	9,386	495,160
Western Australia ..	273,079	743	2,485	57	34,977	13,224	8,167	332,732
Tasmania ..	170,743	566	120	5	25,546	11,796	5,004	213,780
TERRITORIES—								
Northern ..	2,331	7	325	3	331	657	213	3,807
Federal Capital ..	2,069	8	7	..	326	143	19	2,572
Total ..	4,513,585	13,550	15,217	943	600,206	205,592	86,641	5,435,734

(ii) *Place of Education.* At the Census of 1921 the place of instruction was given for 1,023,462 persons, and of these 74.92 per cent. were attending State schools, 18.93 per cent. were at private schools, 2.44 per cent. at technical schools, 3 per cent. were

receiving instruction at home, and 7 per thousand were attending universities. Of the males receiving instruction, 75.84 per cent. were at State schools, and 17.04 per cent. were at private schools; of the females 73.96 per cent. were at State schools and 20.90 per cent. at private schools.

POPULATION.—PLACE OF EDUCATION, CENSUS, 4th APRIL, 1921.

(EXCLUSIVE OF FULL-BLOOD ABORIGINALS.)

States and Territories.	Number being educated at—					Total.
	State School.	Private School.	Technical School.	University.	At Home.	

MALES.						
STATES—						
New South Wales	150,561	35,199	6,512	2,122	6,081	200,475
Victoria	104,053	28,544	6,533	1,935	2,567	143,632
Queensland	60,168	10,269	1,517	187	2,953	75,094
South Australia	37,407	6,603	1,086	635	942	46,673
Western Australia	26,077	5,397	1,506	158	863	34,001
Tasmania	16,684	2,751	441	92	691	20,659
TERRITORIES—						
Northern	118	19	..	..	23	160
Federal Capital	200	18	172	..	21	411
Total	395,268	88,800	17,767	5,129	14,141	521,105

FEMALES.						
STATES—						
New South Wales	140,804	42,354	2,394	812	7,100	193,464
Victoria	99,572	31,244	1,564	728	3,205	136,313
Queensland	55,882	13,188	1,495	74	3,210	73,849
South Australia	34,990	7,779	513	355	1,100	44,737
Western Australia	24,279	6,902	1,079	109	1,069	33,438
Tasmania	15,775	3,453	71	45	849	20,193
TERRITORIES—						
Northern	121	39	..	..	27	187
Federal Capital	150	15	..	..	11	176
Total	371,573	104,974	7,116	2,123	16,571	502,357

PERSONS.						
STATES—						
New South Wales	291,365	77,553	8,906	2,934	13,181	393,939
Victoria	203,625	59,788	8,097	2,663	5,772	279,945
Queensland	116,050	23,457	3,012	261	6,163	148,943
South Australia	72,397	14,382	1,599	990	2,042	91,410
Western Australia	50,356	12,299	2,585	267	1,932	67,439
Tasmania	32,459	6,204	512	137	1,540	40,852
TERRITORIES—						
Northern	239	58	..	..	50	347
Federal Capital	350	33	172	..	32	587
Total	766,841	193,774	24,883	7,252	30,712	1,023,462

5. Religions.—At the Census of the 4th April, 1921, of a total population of 5,435,734, the number who objected to state their religion was 46,268; a further number of 45,990 failed to specify their religion in any degree; 20,544 stated that they had no religion; and 19,886 classed themselves in indefinite groups, such as "Freethinker," "Agnostic," "No Denomination," etc. Of those remaining (5,303,046), 5,267,641, or 99.33 per cent., were definitely stated to be Christians, and 35,405 were stated to be Non-Christians. The number who were definitely stated to be Christians represented nearly 97 per cent. of the total population. Of the total Christians, 2,372,995, or 45.04 per cent., belonged to the Church of England; 1,134,002, or 21.53 per cent., to the Roman Catholic Church; 636,974, or 12.09 per cent., to the Presbyterian Church; and 632,629, or 12.01 per cent., were Methodists. Thus, the four denominations named embraced over 90 per cent. of the

declared Christians. It is possible that the number given above for Roman Catholics may be somewhat understated, as some of those shown in the table as "Catholics undefined" were doubtless Roman Catholics.

Similar particulars for each State of the Commonwealth may be found in the bulletins published in connexion with the Census of 1921.

**POPULATION OF AUSTRALIA, CENSUSES OF 1901, 1911, AND 1921,
ACCORDING TO RELIGION AND SEX.**

(EXCLUSIVE OF FULL-BLOOD ABORIGINALS.)

RELIGION.	MALES.			FEMALES.			PERSONS.		
	Census of 31st March, 1901.	Census of 3rd April, 1911.	Census of 4th April, 1921.	Census of 31st March, 1901.	Census of 3rd April, 1911.	Census of 4th April, 1921.	Census of 31st March, 1901.	Census of 3rd April, 1911.	Census of 4th April, 1921.
I. CHRISTIAN—									
Baptist ..	42,662	45,661	49,194	46,676	51,413	56,509	89,338	97,074	105,703
Catholic, Roman ..	433,504	465,803	565,029	417,116	455,622	565,973	850,620	921,425	1,134,002
Catholic, Greek ..	1,075	2,172	3,938	239	474	1,434	1,314	2,646	5,372
Catholic, Undefined ..	2,748	38,772	20,082	2,431	36,607	18,577	5,179	75,379	38,659
Church of Christ ..	11,265	17,382	24,680	12,927	21,366	29,894	24,192	38,748	54,574
Church of England ..	783,413	884,634	1,212,772	714,163	825,809	1,160,223	1,497,576	1,710,443	2,372,996
Congregational ..	35,603	35,367	34,931	37,958	38,679	39,582	73,561	74,046	74,513
Independent ..	43,329	40,993	31,627	31,692	31,402	25,892	75,021	72,395	57,519
Lutheran ..	251,611	269,641	306,785	252,490	278,165	325,844	504,101	547,806	632,629
Methodist ..	221,601	289,591	322,072	204,504	268,745	314,902	426,105	558,336	636,974
Presbyterian ..	11,485	63,079	37,309	9,073	46,782	29,803	20,558	109,861	67,112
Protestant, Undefined ..	14,802	12,322	14,584	16,298	14,343	17,005	31,100	26,665	31,589
Salvation Army ..	1,411	2,536	4,640	1,921	3,559	6,665	3,332	6,095	11,305
Seventh Day Adventist ..	1,620	1,307	1,012	1,009	868	702	2,629	2,175	1,714
Unitarian ..	10,941	15,796	20,989	10,879	15,524	21,992	21,823	31,320	42,981
Others ..									
Total, Christian	1,867,073	2,185,056	2,649,644	1,759,376	2,089,358	2,617,997	3,626,449	4,274,414	5,267,641
II. NON-CHRISTIAN—									
Hebrew ..	8,137	9,165	11,392	7,102	8,122	10,223	15,239	17,287	21,615
Buddhist ..		3,110	1,945		159	120		3,269	2,065
Chinese ..		3,243	3,512		40	79		3,283	3,691
Confucian ..	34,712	5,036	2,536	954	158	156	35,666	5,194	2,692
Mohammedan ..		3,706	2,647		202	221		3,908	2,868
Pagan ..		1,422	426		25	31		1,447	457
Others, Non-Christian ..	1,784	1,952	1,470	682	445	647	2,466	2,397	2,117
Total, Non-Christian	44,633	27,634	23,928	8,738	9,151	11,477	53,371	36,785	35,406
III. INDEFINITE—									
Freethinker ..	7,863	2,753	2,942	1,319	501	687	9,182	3,254	3,629
Agnostic ..	834	2,546	2,583	137	538	651	971	3,084	3,234
No Denomination ..	13,620	1,568	1,784	6,137	1,120	1,592	19,757	2,688	3,376
Others ..	638	3,531	5,787	463	2,116	3,860	1,101	5,647	9,647
Total ..	22,955	10,398	13,096	8,056	4,275	6,790	31,011	14,073	19,886
IV. NO RELIGION—									
Atheist ..	245	516	1,014	29	63	186	274	579	1,200
Others ..	5,168	7,723	15,008	1,337	1,714	4,336	6,505	9,437	19,344
Total ..	5,413	8,239	16,022	1,366	1,777	4,522	6,779	10,016	20,544
V. OBJECT TO STATE ..	28,443	55,766	29,952	13,688	27,237	16,316	42,131	83,003	46,268
VI. UNSPECIFIED ..	9,411	25,942	30,228	4,649	10,172	15,762	14,060	36,114	45,990
GRAND TOTAL ..	1,977,928	2,313,035	2,762,870	1,795,873	2,141,970	2,672,864	3,773,801	4,455,005	5,435,734

6. **Conjugal Condition.**—The number of persons whose conjugal condition was definitely stated at the Census of 4th April, 1921, was 5,421,191, of whom 2,753,740 were males and 2,667,451 were females. Of the 5,421,191 persons referred to, 1,998,662, or 36.86 per cent., were married, as compared with 33 per cent. in 1911; 237,821, or 4.39 per cent., were widowed; 8,528, or 0.15 per cent., were divorced; and 3,176,180, or 58.60 per cent., had never married. Of those who had never married, 1,725,004, or 54.31 per cent., were under 15 years of age. The proportion of married persons per cent. to the total population of the several States varied in the following order:—South Australia, 38.14; New South Wales, 37.40; Western Australia, 36.85; Victoria, 36.63; Tasmania, 35.88; Queensland, 35.32. On the basis of the adult population, the percentage of married persons in Australia was about 63.36, and in each State was approximately as follows:—Tasmania, 65.66; South Australia, 65.31; New South Wales, 64.78; Western Australia, 64.16; Queensland, 62.65; Victoria, 60.99.

POPULATION.—CONJUGAL CONDITION, CENSUS, 4th APRIL, 1921.

(EXCLUSIVE OF FULL-BLOOD ABORIGINALS.)

Conjugal Condition.	States.						Territories.		Australia
	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	North- ern.	Fed. Cap.	
MALES.									
Never married—									
Under age 15 ..	343,979	231,086	128,043	79,544	54,446	37,142	400	458	875,098
Age 15 and over ..	302,574	222,177	124,639	66,880	54,346	29,085	1,545	551	801,797
Total never married	646,553	453,263	252,682	146,424	108,792	66,227	1,945	1,009	1,676,895
Married ..	391,844	277,183	134,649	94,263	61,899	38,203	704	529	999,274
Widowed ..	27,851	21,279	10,001	6,657	4,528	2,909	88	28	73,341
Divorced ..	2,214	1,092	301	220	316	81	5	1	4,230
Unspecified ..	3,039	1,907	1,336	703	1,743	323	79	..	9,130
Total ..	1,071,501	754,724	398,969	248,267	177,278	107,743	2,821	1,567	2,762,870
FEMALES.									
Never married—									
Under age 15 ..	334,385	224,850	123,543	77,092	52,948	36,302	404	382	849,906
Age 15 and over ..	237,693	211,833	81,993	59,421	32,895	25,212	164	168	649,379
Total never married	572,078	436,683	205,536	136,513	85,843	61,514	568	550	1,499,285
Married ..	391,886	282,494	131,658	94,535	59,736	38,279	372	428	999,388
Widowed ..	60,701	54,928	19,039	15,262	8,528	5,965	33	26	164,480
Divorced ..	2,395	1,221	187	164	294	37	..	..	4,298
Unspecified ..	1,810	1,230	583	419	1,055	242	73	1	5,413
Total ..	1,028,870	776,556	357,003	246,893	155,454	106,037	1,046	1,005	2,672,864
PERSONS.									
Never married—									
Under age 15 ..	678,364	455,936	251,586	156,636	107,394	73,444	804	840	1,725,004
Age 15 and over ..	540,267	434,010	206,632	126,301	87,241	54,297	1,709	719	1,451,176
Total never married	1,218,631	889,946	458,218	282,937	194,635	127,741	2,513	1,559	3,176,180
Married ..	783,730	559,677	266,307	188,798	121,635	76,482	1,076	957	1,998,662
Widowed ..	88,552	76,207	29,040	21,919	13,054	8,874	121	54	237,821
Divorced ..	4,609	2,313	488	384	610	118	5	1	8,528
Unspecified ..	4,849	3,137	1,919	1,122	2,798	565	152	1	14,543
Total ..	2,100,371	1,531,280	755,972	495,160	332,732	213,780	3,867	2,572	5,435,734

7. *Occupations.*—(i) *General.* The following table shows, for each State and Territory and for Australia as a whole, the population—males and females separately—grouped according to the various classes of occupations. The bulletins which have been published in connexion with the Census of 1921 give, in greater detail than is possible here, the occupations of the people of each State and Australia, and also give comparisons of the results of the Censuses of 1911 and 1921.

(ii) *Breadwinners.* Assuming that all of those persons whose occupations were not specified were breadwinners, there were at the Census of 1921, 2,341,211 bread-winners, representing 43.1 per cent. of the total population. At the Census of 1911, the bread-winners represented 44.5 per cent. of the population. Of the total male population, 67.8 per cent. were bread-winners in 1921, as compared with 68.9 per cent. in 1911. Of the female population the percentage of bread-winners was 17.5 in 1921, and 18.5 in 1911. The proportion of females to the total of bread-winners was almost identical at both periods, being slightly over 20 per cent.

(iii) *Industrial.* The decade 1911–1921 marks an interesting phase in the industrial development of Australia, inasmuch as, during that period, the persons engaged in manufacturing and other secondary processes became more numerous than those engaged in primary production. In 1911, the Industrial Class already had first place in New South Wales, Victoria, and South Australia, but in the other States the predominance of the Primary Class was such that, for Australia as a whole, the Primary Class was the greater. In 1921, the preponderance of the Industrial Class in New South Wales, Victoria, and South Australia had increased to such an extent, and at the same time the excess in favour of the primary industries, though still existent in Queensland, Western Australia, and Tasmania, had so diminished, that the number of persons engaged in industrial occupations throughout Australia exceeded those in the primary industries by 124,864, or by nearly 21 per cent. In 1911 the primary industries employed 39,711 persons, or 7.0 per cent., more than were employed in the industrial group. Of the total of 2,316,716 breadwinners recorded in 1921, 723,559, or 31.2 per cent., belonged to the Industrial Class, as compared with 562,337, or 28.7 per cent., of all bread-winners in 1911. The principal group within the Industrial Class is composed of the manufacturing industries. During the intercensal period, the number of persons engaged in manufacturing industries increased from 363,805, or 18.5 per cent., of all bread-winners in 1911, to 441,284, or 19 per cent., of bread-winners in 1921, an increase of 77,479, or 21.3 per cent.

(iv) *Primary Producers.* As mentioned in the preceding paragraph, the primary producers have ceased to be the most numerous of the occupational classes. In 1911 the primary producers recorded at the Census numbered 586,148, or 29.9 per cent., of all bread-winners, and although the number increased to 598,695, this greater number represented only 25.8 per cent. of the bread-winners in 1921. The number of persons engaged in Agriculture increased by 18.5 per cent., which was sufficient to increase slightly the proportion which the agricultural workers bore to the total bread-winners in 1911. The number engaged in the Pastoral Industries declined from 151,861 to 142,094, or by 6.4 per cent. The number engaged in Mining was less in 1921 by 39,038, or 36.9 per cent., having fallen to 66,766 from 105,804 in 1911.

Those engaged in Forestry and in connexion with Water Supply, though still relatively few, increased substantially—the former by 24 per cent., and the latter by 53.5 per cent.

(v) *Commercial.* The number of persons recorded as engaged in commercial pursuits in Australia as a whole increased by 23.8 per cent. during the intercensal decade, the increases in the various States ranging from about 18 per cent. in Victoria and Tasmania to 30.5 per cent. in New South Wales. This class represented 15.3 per cent. of all bread-winners in Australia in 1921, as against 14.6 per cent. in 1911. The similar proportions in the various States in 1921 were:—New South Wales, 15.7 per cent.; Victoria, 16.1 per cent.; Queensland, 13.3 per cent.; South Australia, 16 per cent.; Western Australia, 14.9 per cent.; and Tasmania, 12.2 per cent.

(vi) *Domestic.* Notwithstanding an increase in the number in the Domestic Class from 201,366 in 1911 to 209,971 in 1921, the class relatively to the total bread-winners has fallen from 10.3 per cent. in 1911 to 9.1 per cent. in 1921. For Australia as a whole

the number in the Domestic Class increased by 8,605, of whom 6,868 were females. The number in this class was actually less in 1921 in Victoria by 6.4 per cent., and in Tasmania by 7.2 per cent. than in 1911, while in the other States the increases vary from 3.1 per cent. in Western Australia to 12.5 per cent. in South Australia.

(vii) *Transport and Communication.* The number of persons employed in connexion with transport and communication increased from 157,391, or 8 per cent., of all bread-winners in 1911, to 207,737, or 9 per cent. in 1921.

(viii) *Professional.* The Professional Class embraces all persons, not otherwise classed, who are mainly engaged in government and defence, and in ministering to the moral, intellectual, and social wants of the community. The number of persons in this class increased from 144,611 in 1911 to 201,319 in 1921, or by 39.2 per cent. The Professional Class represented 8.7 per cent. of all breadwinners in 1921, as compared with 7.4 per cent. in 1911.

POPULATION.—OCCUPATIONS, CENSUS OF 4th APRIL, 1921.

(EXCLUSIVE OF FULL-BLOOD ABORIGINALS.)

Occupation.	States.						Territories.		Australia
	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	North- ern.	Fed. Cap.	
MALES.									
Class									
I. Professional..	48,543	36,087	15,034	9,108	8,076	3,990	118	527	121,483
II. Domestic ..	20,786	13,640	6,297	3,853	3,870	1,411	106	9	49,972
III. Commercial ..	107,474	83,760	33,617	25,671	16,811	7,782	180	30	275,325
IV. Transport and Communication ..	81,826	51,266	28,620	18,896	13,898	5,715	261	41	200,523
V. Industrial ..	243,862	181,302	74,841	55,572	28,287	20,174	436	202	604,676
VI. Primary Pro- ducers ..	205,557	144,080	107,529	51,638	48,522	29,415	1,255	314	588,310
VII. Independent ..	5,121	4,239	1,364	830	537	575	1	..	12,667
Total Bread-winners	713,169	514,374	267,302	165,568	120,001	69,062	2,357	1,123	1,852,956
VIII. Dependents..	349,789	235,298	129,123	80,520	55,480	37,620	378	440	888,648
Unspecified ..	8,543	5,052	2,544	2,179	1,797	1,061	86	4	21,266
Total ..	1,071,501	754,724	398,969	248,267	177,278	107,743	2,821	1,567	2,762,870
FEMALES.									
Class									
I. Professional ..	29,233	24,498	11,006	6,756	5,328	2,953	33	29	70,836
II. Domestic ..	60,904	44,585	22,487	15,797	10,169	5,889	106	62	159,999
III. Commercial..	31,270	24,251	9,475	7,240	4,973	2,465	4	6	79,684
IV. Transport and Communication ..	2,693	2,066	1,170	597	324	361	2	1	7,214
V. Industrial ..	40,806	52,943	10,532	7,975	4,239	2,376	9	3	118,888
VI. Primary Pro- ducers ..	3,153	3,358	2,020	946	457	448	2	1	10,386
VII. Independent ..	2,876	3,378	639	376	269	221	..	..	7,759
Total Bread-winners	170,935	155,079	57,329	39,687	25,759	14,713	156	102	463,700
VIII. Dependents..	856,463	621,081	299,337	207,101	128,910	91,227	853	903	2,205,875
Unspecified ..	1,472	396	337	105	785	97	37	..	3,229
Total ..	1,028,870	776,556	357,003	246,893	155,454	106,037	1,046	1,005	2,672,864

POPULATION.—OCCUPATIONS, CENSUS OF 4TH APRIL, 1921—*continued*.

Occupations.	States.						Territories.		Australia
	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	North-ern.	Fed. Cap.	
PERSONS.									
Class									
I. Professional	77,776	60,585	26,040	15,864	13,404	6,943	151	556	201,319
II. Domestic ..	81,690	58,225	28,784	19,650	14,039	7,300	212	71	209,971
III. Commercial	138,744	108,011	43,092	32,911	21,784	10,247	184	36	355,009
IV. Transport and Communication ..	84,519	53,332	29,790	10,493	14,222	6,076	263	42	207,737
V. Industrial ..	284,668	234,245	85,373	63,547	32,526	22,550	445	205	723,559
VI. Primary Pro- ducers ..	208,710	147,438	109,549	52,584	48,979	29,863	1,257	315	598,695
VII. Independent	7,997	7,617	2,003	1,206	806	796	1	..	20,426
Total Breadwinners	884,104	669,453	324,631	205,255	145,760	83,775	2,513	1,225	2,316,716
VIII. Dependents..	1,206,252	856,379	428,460	287,621	184,390	128,847	1,231	1,343	3,094,523
Unspecified ..	10,015	5,448	2,881	2,284	2,582	1,158	123	4	24,495
Total ..	2,100,371	1,531,280	755,972	495,160	332,732	213,780	3,867	2,572	5,435,784

(ix) *Changes in Occupation, 1871 to 1921.* The following table and the accompanying graphs show the changes which have taken place in the occupations of the people in the 50 years from 1871 to 1921.

The graph herein and table of percentages given therewith show clearly the relative decline in the number of bread-winners engaged in the primary industries and the corresponding expansion of the other industrial groups.

The arrest of progress from the financial crisis of the nineties is also brought into striking relief. From the Census of 1871 the proportion engaged in the primary group declined, and that in the industrial group rose until at the Census of 1891 the two groups were practically equal. The Census of 1901, i.e., after the financial collapse, shows a reversion to the primary from the secondary industries. A feature of the movement of that time was the transfer of workers from the industries of the eastern States to the gold-fields of Western Australia. The same cause was no doubt responsible for the increased proportion represented in 1901 by the domestic class, which, with this exception, has declined since 1881.

The curve of the development of the industrial group during the twenty years 1901–1921 is somewhat similar to that during the period 1871 to 1891, but, whereas in 1891 the proportions represented by the industrial and primary groups were equal, in 1921 the industrial group represented 31.2 per cent. of all bread-winners, and the primary group 25.8 per cent. only.

The increased proportions represented by the professional, commercial, and transport classes indicate the higher standard of life and the increasing complexity of the social structure.

OCCUPATIONS OF THE POPULATION OF AUSTRALIA AT THE CENSUSES 1871-1921.

Class.	1871.			1881.		
	Males.	Females.	Persons.	Males.	Females.	Persons.
I. Professional ..	25,707	9,827	35,534	35,505	14,990	50,495
II. Domestic ..	19,532	60,152	79,684	31,591	79,573	111,164
III. Commercial ..	51,231	4,900	56,131	74,014	9,904	83,918
IV. Transport and Communication ..	26,024	149	26,173	40,952	493	41,445
V. Industrial ..	158,923	23,692	182,615	225,183	43,957	269,140
VI. Primary Producers ..	291,045	11,999	303,044	333,853	15,491	349,344
VII. Independent ..	3,848	2,105	5,953	5,248	3,530	8,778
Total Bread- winners ..	576,310	112,824	689,134	746,346	167,938	914,284
VIII. Dependents ..	337,064	642,388	979,452	469,965	868,368	1,338,333
Total ..	913,374	755,212	1,668,586	1,216,311	1,036,306	2,252,617

Class.	1891.			1901.		
	Males.	Females.	Persons.	Males.	Females.	Persons.
I. Professional ..	57,579	27,308	84,887	70,702	41,654	112,356
II. Domestic ..	44,677	113,974	158,651	50,541	151,675	202,216
III. Commercial ..	149,891	17,762	167,653	189,285	34,743	224,028
IV. Transport and Communication ..	89,903	2,729	92,632	119,254	3,448	122,702
V. Industrial ..	359,726	59,719	419,445	352,860	76,152	429,012
VI. Primary Producers ..	385,214	34,285	419,499	496,654	39,112	535,766
VII. Independent ..	10,766	12,360	23,126	12,294	10,136	22,430
Total Bread- winners ..	1,097,756	268,137	1,365,893	1,291,590	356,920	1,648,510
VIII. Dependents ..	606,283	1,202,216	1,808,499	686,338	1,438,953	2,125,291
Total ..	1,704,039	1,470,353	3,174,392	1,977,928	1,795,873	3,773,801

Class.	1911.			1921.		
	Males.	Females.	Persons.	Males.	Females.	Persons.
I. Professional ..	93,324	53,284	146,608	122,881	80,392	203,273
II. Domestic ..	48,871	154,054	202,925	50,546	161,113	211,659
III. Commercial ..	240,612	50,754	291,366	278,485	80,239	358,724
IV. Transport and Communication ..	154,009	4,845	158,854	202,884	7,264	210,148
V. Industrial ..	459,871	109,261	569,132	611,648	119,711	731,359
VI. Primary Producers ..	591,505	17,338	608,843	594,969	10,457	605,426
VII. Independent ..	17,286	9,116	26,402	12,809	7,813	20,622
Total Bread- winners ..	1,605,478	398,652	2,004,130	1,874,222	466,989	2,341,211
VIII. Dependents ..	707,557	1,743,318	2,450,875	888,648	2,205,875	3,094,523
Total ..	2,313,035	2,141,970	4,455,005	2,762,870	2,672,864	5,435,734

NOTE.—In this table those cases for which no occupation was stated have been distributed proportionately over the various classes of bread-winners.

8. *Grade of Employment.*—(i) *General.* The term “grade of employment” indicates the capacity in which persons are employed in the various branches of industry. The grades recorded are five in number, viz. :—(a) Employer, (b) Working on own account, (c) Assisting but not receiving wages or salary, (d) Receiving wages or salary, (e) Unemployed. In addition to these categories provision is made for (f) Grade not applicable—which consists mainly of dependents and persons of independent means not engaged in gainful occupations, and (g) Grade not stated.

Preliminary results similar to those given in the following table have already been published in the Census bulletins, where they were shown in comparison with the results from the Census of 1911.

(ii) *Employers and Workers on Own Account.*—A marked feature of the comparison was the decline in the number of employers, and the increase in the number of those working on their own account. These changes were common to all the States. For Australia as a whole the number of employers fell from 212,583 in 1911 to 139,623 in 1921, or by 34.3 per cent., while the number working on their own account increased by nearly 9½ per cent. from 177,114 in 1911, to 342,321 in 1921. From these results it would appear that many of the small employers of 1911 had dispensed with paid assistance in 1921. It is probable, also, that the establishment of returned soldiers in small businesses and other ventures increased the number of workers on their own account.

(iii) *Assisting but not Receiving Wages.*—The number of those assisting but not receiving wages or salary—mainly sons, daughters, or other relatives of the principal—fell by 54.4 per cent., from 76,370 in 1911 to 34,792 in 1921.

(iv) *Wage Earners.*—In considering the extent of the wage and salary-earning portion of the community, account must be taken of the persons returned as unemployed at the date of the Census, since, ordinarily, these persons are wage or salary earners. Combining the two grades, therefore, it appears that of the total population of Australia on the 4th April, 1921, the wage and salary earners represented 31 per cent. Excluding those persons to whom grade of employment is not applicable and those whose grade was not stated, it may be said that 74 per cent. of male bread-winners and 86 per cent. of the female bread-winners were wage or salary earners.

(v) *Unemployed.*—The number returned as unemployed in 1921 was nearly three times as great as in 1911, and these results are substantially confirmed by figures collected periodically by the Labour and Industrial Branch of this Bureau.

POPULATION.—GRADE OF EMPLOYMENT, AUSTRALIA, CENSUS OF 4th APRIL, 1921.

(EXCLUSIVE OF FULL-BLOOD ABORIGINALS.)

Grade.	States.						Territories.		Australia
	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	North- ern.	Fed. Cap.	
MALES.									
Employer ..	44,700	40,636	18,150	12,625	8,539	4,358	99	35	129,142
Working on own ac- count ..	104,483	82,436	48,423	27,206	19,984	13,049	572	138	296,291
Assisting but not re- ceiving wages or salary ..	9,710	10,741	5,158	2,721	1,413	1,862	10	5	31,626
Receiving wages or salary ..	455,959	315,390	151,301	104,858	76,533	42,077	1,281	733	1,148,132
Unemployed ..	54,028	32,432	30,392	9,232	7,671	3,554	342	24	137,675
Grade not applicable	391,753	266,665	142,786	89,606	61,113	41,605	433	629	994,500
Grade not stated ..	10,868	6,424	2,759	2,019	2,025	1,238	84	3	25,420
Total ..	1,071,501	754,724	398,969	248,267	177,278	107,743	2,821	1,567	2,762,870

POPULATION.—GRADE OF EMPLOYMENT, AUSTRALIA, CENSUS OF
4th APRIL, 1921—*continued.*

Grade.	States.						Territories.		Australia
	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	North- ern.	Fed. Cap.	
FEMALES.									
Employer ..	3,192	4,069	1,420	790	661	347	..	2	10,481
Working on own account ..	17,280	14,607	5,318	4,288	2,934	1,588	13	2	46,030
Assisting but not re- ceiving wages or salary ..	1,256	992	571	201	85	67	..	..	3,172
Receiving wages or salary ..	130,294	118,035	44,305	31,312	19,146	11,440	133	96	354,781
Unemployed ..	7,612	7,576	2,956	1,348	1,400	509	3	1	21,405
Grade not applicable	866,379	629,065	301,818	208,432	130,272	91,887	896	904	2,229,653
Grade not stated ..	2,857	2,212	615	522	956	199	1	..	7,362
Total ..	1,028,870	776,556	357,003	246,893	155,454	106,037	1,046	1,005	2,672,864

PERSONS.

Employer ..	47,892	44,705	19,570	13,415	9,200	4,705	99	37	139,623
Working on own account ..	121,763	97,043	53,741	31,494	22,918	14,637	585	140	342,321
Assisting but not re- ceiving wages or salary ..	10,966	11,733	5,729	2,922	1,498	1,929	10	5	34,792
Receiving wages or salary ..	586,253	433,425	195,606	136,170	95,679	53,517	1,414	829	1,502,893
Unemployed ..	61,640	40,008	33,348	10,580	9,071	4,063	345	25	159,080
Grade not applicable	1,258,132	895,730	444,604	298,038	191,385	133,492	1,329	1,533	3,224,243
Grade not stated ..	13,725	8,636	3,374	2,541	2,981	1,437	85	3	32,782
Total ..	2,100,371	1,531,280	755,972	495,160	332,732	213,780	3,867	2,572	5,435,734

9. Unemployment.—(i) *Causes.* In the preceding table it was shown that at the Census of the 4th April, 1921, there were in Australia 1,661,973 wage or salary earners, of whom 159,080 were unemployed. The following table gives the causes of unemployment so far as they were ascertained. Of the 159,080 returned as unemployed, 7,416, or 4.7 per cent., failed to state the cause. For the remainder, approximately 50 per cent. of the unemployment was due to scarcity of work, 29 per cent. to illness or accident, 3 per cent. to industrial disputes, 1.5 per cent. to old age, and 17 per cent. to other causes.

POPULATION.—CAUSES OF UNEMPLOYMENT, AUSTRALIA, CENSUS OF
4th APRIL, 1921.

(EXCLUSIVE OF FULL-BLOOD ABORIGINALS.)

Particulars.	Scarcity of Em- ployment.	Illness.	Accident.	Industrial Dispute.	Old Age.	Other Cause.	Cause not Stated.	Total.
Males ..	68,751	29,799	4,556	4,249	2,068	22,001	6,251	137,675
Females ..	6,092	9,551	246	299	71	3,990	1,165	21,405
Persons ..	74,843	39,350	4,802	4,539	2,139	25,991	7,416	159,080

(ii) *Duration.* At the Census of 1921 persons who were unemployed on Saturday, 2nd April, 1921, were asked to state the number of working days during which they had been out of work, but 24,148, or 15.2 per cent., of those concerned failed to comply with the request. The results of the inquiry are summarized in the following table. Of the 134,932 cases for which the duration was stated, approximately 46 per cent. were unemployed under five weeks, 17.2 per cent. from five to ten weeks, 10.6 per cent. from ten to fifteen weeks, and 26.2 per cent. above fifteen weeks:—

POPULATION.—DURATION OF UNEMPLOYMENT, AUSTRALIA, CENSUS OF
4th APRIL, 1921.

(EXCLUSIVE OF FULL-BLOOD ABORIGINALS.)

Duration of Unemployment in Working Days.	4th April, 1921.			Duration of Unemployment in Working Days.	4th April, 1921.		
	Males.	Females.	Persons.		Males.	Females.	Persons.
Under 10 ..	22,029	3,419	25,448	70-79 ..	4,181	673	4,854
10-19 ..	18,910	2,870	21,780	80-89 ..	2,405	341	2,746
20-29 ..	12,787	1,983	14,770	90 and over ..	30,901	4,513	35,414
30-39 ..	10,173	1,591	11,764	Not stated ..	20,671	3,477	24,148
40-49 ..	6,103	997	7,100				
50-59 ..	3,759	624	4,383				
60-69 ..	5,756	917	6,673	Total ..	137,675	21,405	159,080

(iii) *Unemployment in States.* Particulars regarding unemployment in the separate States at the time of the Census may be found in Part XVII. (Occupations) of the tables relating to the Census of 1921.

§ 9. Dwellings.

[NOTE.—Information concerning dwellings will be found in detail in Census Parts Nos. XVIII.—XXV.]

1. *General.*—The following table presents a summary for the States and Territories and for the whole of Australia of the results relating to dwellings which were obtained from the Census of 1921. With those in course of construction on the 4th April, 1921, there were in Australia 1,210,790 dwellings—including hotels, boarding-houses, hospitals, gaols and any structure for the purpose of shelter as a dwelling, but excluding wagons used as camps, and dwellings occupied solely by full-blood aboriginals. The number of dwellings per square mile varies from one dwelling to every 433 square miles in the Northern Territory to 1.87 dwellings per square mile (approximately one dwelling to every half a square mile) in Tasmania, the average throughout Australia being 0.41 dwellings to the square mile. Of the total dwellings referred to above, 51,166 were unoccupied. This, however, does not necessarily imply that all dwellings so described were “to let” but, merely, that they had no inmates on the night of the Census. The average number of rooms per occupied dwelling ranged among the States from 5.33 in Victoria to 4.59 in Western Australia, the average for Australia being 4.96 as compared with 5.18 in 1911. The number of persons per occupied dwelling varied from 4.85 in New South Wales to 4.52 in Western Australia, the average for Australia being 4.71, as compared with 4.82 in 1911. From the foregoing it may be deduced that throughout Australia there were 0.95 persons per room in 1921, as against 0.93 persons in 1911.

2. *Occupied Private Dwellings.*—It is considered that a better index to the housing conditions of the people is obtained by excluding all other than occupied *private* dwellings. The following table shows that of the 1,153,285 occupied dwellings in Australia, 1,107,010 were private dwellings. These private dwellings contained an average of 4.94 rooms in

1921, as compared with 4.93 in 1911, and had an average of 4.40 inmates, as against 4.53 in 1911. It would appear, therefore, that approximately the number of inmates per room in occupied private dwellings throughout Australia has fallen from 0.92 in 1911 to 0.89 in 1921.

3. *Private Dwellings occupied by Tenants.*—The proportion of private dwellings which were occupied by tenants throughout Australia has fallen from 47.78 per cent. in 1911 to 43.67 in 1921. This fact is due mainly to the increase in the number of dwellings occupied by rent purchasers, which has been brought about by the policies of the State Governments of advancing money for the building of homes, and by the activities of the War Service Homes Commissioners.

DWELLINGS.—AUSTRALIA, CENSUS, 4th APRIL, 1921.

(EXCLUSIVE OF DWELLINGS OCCUPIED SOLELY BY FULL-BLOOD ABORIGINALS.)

(Subject to revision.)

Particulars of Dwellings.	States.						Territories.		Australia
	New South Wales.	Victoria.	Q'land.	South Aust.	West. Aust.	Tasmania.	North-ern.	Federal Cap.	
All Dwellings									
Occupied (a) ..	432,976	331,290	160,139	107,914	73,548	45,818	1,074	526	1,153,285
Unoccupied ..	18,619	14,994	6,747	4,431	3,274	2,934	138	29	51,166
Being Built ..	2,724	2,009	347	674	289	295	1	..	6,339
Total Dwellings ..	454,319	348,293	167,233	113,019	77,111	49,047	1,213	555	1,210,790
Number of Dwellings per square mile ..	1.47	3.96	0.25	0.30	0.08	1.87	.002	0.59	0.41
Rooms per Occupied Dwelling ..	5.23	5.33	5.31	5.09	4.59	4.70	2.80	5.29	4.96
Population per Occupied Dwelling ..	4.85	4.62	4.72	4.59	4.52	4.67	3.60	4.89	4.71
Occupied <i>Private</i> Dwellings ..	414,468	318,936	153,313	104,295	70,185	44,432	1,005	376	1,107,010
Rooms per Dwelling ..	4.97	5.11	4.94	4.90	4.22	4.80	2.70	4.85	4.94
Inmates per Dwelling ..	4.52	4.34	4.40	4.34	4.11	4.44	2.83	4.39	4.40
Inmates per Room ..	0.92	0.85	0.89	0.89	0.97	0.93	1.05	0.91	0.89
Percentage occupied by Tenants ..	49.72	42.46	33.59	40.67	36.95	47.30	25.31	65.18	43.67
Weekly Rental Value(b)	18s. 2d.	16s. 11d.	13s. 6d.	14s. 7d.	14s. 2d.	12s. 0d.	14s. 4d.	9s. 2d.	16s. 7d.

(a) Excluding Wagons and Camps.
occupied by tenants.

(b) Average weekly rental value of private dwellings

4. *Private Dwellings in Urban and Rural Divisions.*—(i) *General.* The following table gives a comparison of the particulars relating to *occupied private dwellings* in the Urban and Rural Divisions of Australia. The table shows that, while the average number of rooms and the average number of inmates per occupied private dwelling are greater in the Metropolitan Area than in the Urban Provincial or Rural Districts, the average number of inmates per room is least in the Metropolitan Districts.

(ii) *Tenants.* The proportion of occupied private dwellings occupied by tenants is greatest in the Metropolitan Areas, where it represents 53.17 per cent. of all dwellings for which the mode of occupancy was stated, as against 46.05 per cent. in the Urban Provincial Districts, and 31.02 per cent. in the Rural Districts. There is, however, in most cases, an essential difference between the economic status of the dwelling in urban districts and in rural districts, inasmuch as in urban districts the dwelling is most frequently a purely residential entity, whereas in rural districts the productive property of the land—to which the dwelling is an appurtenance—is most often the incentive to ownership.

(iii) *Rental Value.* The fact relating to private dwellings which shows the greatest divergence between the Metropolitan and other divisions of the country is the weekly rental value, which varies from an average of 10s. 1d. in the Rural Districts to 20s. 8d. in the Metropolitan Areas.

OCCUPIED PRIVATE DWELLINGS.—URBAN AND RURAL, AUSTRALIA.
CENSUS, 4th APRIL, 1921.

(Subject to revision.)

Particulars.	Urban.		Rural.	Total.
	Metropolitan.	Provincial.		
Occupied Private Dwellings	467,913	207,807	431,290	1,107,010
Rooms per dwelling	5.15	5.07	4.66	4.94
Inmates per dwelling	4.42	4.40	4.39	4.40
Inmates per room	0.86	0.87	0.94	0.89
Percentage occupied by tenants ..	53.17	46.05	31.02	43.67
Weekly rental value (a)	20s. 8d.	14s. 0d.	10s. 1d.	16s. 7d.

(a) Average weekly rental value of private dwellings occupied by tenants.

5. *Private Dwellings in Metropolitan Areas.*—(i) *General.* The following table gives a comparison of the results, ascertained by the Census of 1921, relating to private dwellings in the Metropolitan Areas of the various States. The number of rooms per dwelling varied from a minimum of 4.67 in Perth to a maximum of 5.47 in Brisbane—a difference of 17 per cent.; whereas the number of inmates per dwelling varied from 4.31 in Adelaide to 4.52 in Sydney—a difference of only 5 per cent. The average number of inmates per room was highest in Perth, with 95 persons to every hundred rooms, and lowest in Brisbane, where there were 81 persons to every hundred rooms.

(ii) *Tenants.* The proportion of private dwellings occupied by tenants in the various Metropolitan Areas ranged from 39.18 per cent. in Brisbane to 59.22 per cent. in Sydney, the average for the six capitals being 53.17 per cent., as against 63.48 per cent. in 1911. As already mentioned, the decline during the decade 1911–1921 in the proportion of tenants was due largely to the action of the State Governments and of the War Service Homes Commissioners in facilitating the acquirement of houses under the system of purchase by instalment.

(iii) *Rental Value.* The weekly rent of private dwellings occupied by tenants ranged from 17s. 3d. per week in Brisbane and Hobart to 23s. per week in Sydney.

OCCUPIED PRIVATE DWELLINGS IN METROPOLITAN AREAS.—CENSUS,
4th APRIL, 1921.

(Subject to revision.)

Particulars of Dwellings.	Sydney and Suburbs.	Melbourne and Suburbs.	Brisbane and Suburbs.	Adelaide and Suburbs.	Perth and Suburbs.	Hobart and Suburbs.	Total.
Occupied Private Dwellings ..	173,322	158,001	42,378	53,741	29,741	10,730	467,913
Rooms per Dwelling	5.14	5.19	5.47	5.06	4.67	5.10	5.15
Inmates per Dwelling	4.52	4.34	4.44	4.31	4.43	4.34	4.42
Inmates per room	0.88	0.84	0.81	0.85	0.95	0.85	0.86
Percentage occupied by Tenants ..	59.22	54.14	39.18	46.84	43.57	55.02	53.17
Weekly Rental Value (a)	23s. 0d.	20s. 0d.	17s. 3d.	17s. 7d.	17s. 9d.	17s. 8d.	20s. 6d.
Weekly Rental Value per Room ..	4s. 6d.	3s. 10d.	3s. 2d.	3s. 6d.	3s. 10d.	3s. 5d.	4s. 0d.

(a) Average weekly rental value of private dwellings occupied by tenants.

§ 10. Immigration.

(A) The Encouragement of Immigration into Australia.

1. **General.**—Various measures have from time to time been adopted by the Commonwealth and State Governments, as well as by private societies and individuals, to promote the immigration of suitable settlers into Australia. The activities of the Commonwealth Government (which is vested with constitutional powers in regard to immigration under section 51, xxvii., of the Constitution Act 1900) with respect to the encouragement of immigration, were formerly confined to advertising the resources and attractions of Australia by means of exhibitions, and in handbooks, newspapers, and periodicals. During the war, immigration operations were almost entirely suspended.

2. **Joint Commonwealth and States' Immigration Scheme.**—In 1920 an arrangement was arrived at between the Commonwealth and State Governments under which the Commonwealth is responsible for the recruiting of immigrants abroad and for their transport to Australia; whilst the State Governments advise the Commonwealth as to the numbers and classes of immigrants which they are prepared to receive. Briefly stated, the Commonwealth selects the immigrant according to the requirements of the State concerned and brings him to Australia; and on his arrival the State Government assumes the responsibility for placing him in employment or upon the land. Incidentally, the Commonwealth undertakes all publicity and propaganda in connexion with the encouragement of immigration.

3. **Assisted Passages.**—During the period 1st May, 1925, to 30th April, 1926, the British and Commonwealth Governments will jointly donate the following contributions towards the passages of approved settlers for Australia from the United Kingdom:—Children under 12 years, £16 10s. (representing the whole of the half fare); juveniles 12 and under 17 years, £27 10s.; juveniles 17 years and under 19 years, £22; married couples, including widowers or widows, and wives nominated by husbands, with at least one child under 19 years, £22 per parent (children at rate according to age); others, including children 19 years of age and over, £16 10s. Allowing for this financial assistance, children under 12 years will be carried free; juveniles 12 years of age and under 17 years, who are ordinarily charged for by the shipping companies as adult passengers, will merely require to pay £5 10s. each; juveniles 17 years and under 19 years, £11 each; married couples, including widowers or widows, and wives nominated by husbands, with at least one child under 19 years, £11 per parent (children at rate according to age); others, including children 19 years and over, £16 10s. each. Persons who have previously resided in the Commonwealth are not eligible for assistance. In addition to these contributions, loans of the balance of passage money are in special cases granted by the Governments concerned. Persons entitled to assisted passages are divided into two classes—"Selected" and "Nominated." "Selected" immigrants are those such as farm workers and domestics who are originally recruited abroad by the Commonwealth Government. "Nominated" immigrants are those nominated by persons resident in Australia, and the nominators, who must submit their applications through the officers in charge of the State Immigration Offices in the various capital cities, are held responsible for their nominees upon arrival, so that they shall not become a burden upon the State.

Intending settlers or immigrants may, on application, obtain full information from the Director of Migration and Settlement, Australia House, Strand, London, W.C.2.; or from the Deputy Director, Commonwealth Immigration Office, V.C.A. Buildings, corner of Flinders-street and Collins-place, Melbourne.

4. **New Migration Agreement between British and Commonwealth Governments.**—On the 8th April, 1925, the British and Commonwealth Governments entered into an agreement under which it is proposed to make available to the Governments of the various States, loan moneys at a very low rate of interest, to enable suitable areas of land to be

made available for settlement, or to enable such public works to be carried out as will tend to develop and expand the settlement areas and to increase the capacity of already settled areas to carry a greater population. The maximum amount of loan moneys provided for in the agreement is £34,000,000. It is provided that for every principal sum of £75 issued to a State Government under the agreement, one assisted migrant shall sail direct from the United Kingdom and be received into and satisfactorily settled in the State concerned. If full advantage is taken of the offer of loan moneys contained in the agreement, 450,000 new settlers must be absorbed over a period of ten years.

5. **Results of Assisted Immigration.**—In the earlier days of settlement in Australia, State-assisted immigration played an important part. Such assistance ceased for the time being in Victoria in 1873, in South Australia in 1886, and in Tasmania in 1891. In New South Wales, general State-aided immigration was discontinued in the year 1887, but those who arrived under that system and were still residing in New South Wales, might, under special regulations, send for their wives and families. A certain amount of passage money, graduated according to the age of the immigrant, had to be paid in each case. Under the provisions of these regulations, immigrants to the number of 1,994 received State assistance during the years 1888 to 1899 inclusive. From 1900 to 1905 no assistance of any kind was given, but from 1906 onwards assistance has again been granted. In Queensland and Western Australia, such assistance, although varying considerably in volume from year to year, has been accorded for many years past. Assistance to immigrants, which in the case of Victoria had practically ceased in 1873, has recently been again afforded. In South Australia the principle of State assistance was again introduced in 1911, and in Tasmania in 1912.

The number of assisted immigrants for the years 1914 to 1924, and the total from the earliest times up to the end of 1924 are given in the following table :—

ASSISTED IMMIGRATION.—1914 TO 1924, AND UP TO THE END OF 1924.

Persons.	N.S.W.	Victoria.	Qld.	S. Aust.	W.A.	Tas.	Total.
No. Assisted during 1914	6,655	7,496	4,096	644	1,729	185	20,805
" " " 1915	1,695	1,724	1,599	79	635	64	5,796
" " " 1916	649	327	300	..	103	18	1,397
" " " 1917	239	146	91	..	26	2	504
" " " 1918	199	101	100	..	26	..	426
" " " 1919	67	139	39	..	..	..	245
" " " 1920	3,211	2,763	1,272	..	1,499	314	9,059
" " " 1921	4,980	3,987	1,147	572	3,381	615	14,682
" " " 1922	7,087	9,145	1,711	1,531	4,373	411	24,258
" " " 1923	5,005	9,504	2,377	1,711	7,654	394	26,645
" " " 1924	6,211	8,721	1,788	1,375	6,715	226	25,036
Total to end of 1924 ..	298,495	221,014	222,481	107,896	65,443	24,143	939,472

(B) The Regulation of Immigration into Australia.

1. **Pre-Federal Restrictions.**—(i) *Alien Races.* For many years prior to federation the States had imposed certain restrictions upon the admission of persons desirous of becoming permanent residents. The influx of Chinese, for example, was limited by stringent statutes, and later, general Acts were passed in some of the States which restricted the immigration of other—principally Asiatic—races.

(ii) *Undesirable Immigrants.* Further restrictions were placed upon the admission of persons who were undesirable as inhabitants, either for medical or moral reasons, or who were likely to become an economic burden upon the community.

2. Powers and Legislation of the Commonwealth.—(i) *Constitutional.* Under Part V., Sec. 51, xxvii. and xxviii. of the Commonwealth Constitution Act the Parliament of the Commonwealth is empowered to make laws with respect to immigration and emigration and the influx of criminals. (See page 27 hereinbefore.)

(ii) *Legislation.* The powers above specified have been exercised by the Commonwealth Government, and the laws passed in pursuance thereof supersede the previously existing State laws. The present Commonwealth Acts dealing with Immigration are the Immigration Act 1901–1925 and the Contract Immigrants Act 1905. A summary of the provisions of these Acts (excepting the provisions of the Amending Immigration Acts of 1920, 1924 and 1925, which are given below), containing particulars regarding the admission of immigrants, prohibited immigrants, the liabilities of shipmasters and others, and kindred matters will be found in preceding Year Books (see Year Book, No. 12, pp. 1166 to 1168).

3. Amending Immigration Act 1920.—The principal provisions of this Act, which came into operation as from the 2nd December, 1920, are those prohibiting the entry of (a) any person who advocates the overthrow by force or violence of the established Government of the Commonwealth or of any State or of any other civilized country, or of all forms of law, etc.; (b) for a period of five years, and thereafter until the Governor-General by proclamation otherwise determines, any person of German, Austro-German, Bulgarian, or Hungarian parentage and nationality, or Turk of Ottoman race; (c) any person over 16 years of age who, on demand by an officer, fails to prove that he is the holder of a valid passport; (d) any person who has been deported under any Act.

Section 9 of the War Precautions Act Repeal Act also provides for prohibiting the entry of any British subject who upon being required to make and subscribe an oath or affirmation of loyalty fails to do so.

4. Amending Immigration Act 1924.—The provisions of this Act were mainly intended to improve the machinery of the existing law. Section 3, paragraph (f), of the principal Act was amended to include amongst the classes of prohibited immigrants any persons who in the opinion of an officer were considered likely to become a charge upon the public through having insufficient means of support or from any other cause. It is now required that every alien immigrant must be in possession of at least £40 landing money, unless his maintenance has been guaranteed by some one residing in Australia.

5. Amending Immigration Act 1925.—This measure contains several important amendments, the principal of which are those providing power—(i) To prohibit the entry of any person declared by the Minister to be in his opinion, from information received from the Government of the United Kingdom or of any other part of the British Dominions or from any foreign Government, through official or diplomatic channels, undesirable as an inhabitant of, or visitor to, the Commonwealth. (ii) To prohibit, by proclamation, either wholly or in excess of specified numerical limits, and either permanently or for a specified period, the immigration into the Commonwealth, or the landing at any specified port or place in the Commonwealth, of aliens of any specified nationality, race, class or occupation, in any case where it is deemed desirable so to do—(a) on account of the economic, industrial, or other conditions existing in the Commonwealth; (b) because the persons specified in the proclamation are deemed to be unsuitable for admission into the Commonwealth; or (c) because they are deemed unlikely to become readily assimilated or to assume the duties and responsibilities of Australian citizenship within a reasonable time after their entry. (iii) To deport persons, other than those born in Australia, who have been concerned in Australia in acts directed towards hindering or obstructing, to the prejudice of the public, the transport or the conveyance of passengers, or the provision of necessary services, and whose presence in Australia is considered likely to be injurious to the peace, order, and good government of the Commonwealth. Before action can be taken under the latter provision to deport any person from the Commonwealth, he must be required to appear before a specially appointed Board, to afford him an opportunity to show cause why he should not be deported. The Board will consist of three members nominated by the Minister, and the Chairman must be a person who holds or has held the office of Judge, or of Police, Stipendiary, or Special Magistrate.

6. **Compilation of Statistics.**—The statistics relative to immigration, which are presented in this Chapter, have been compiled by the Department of Home and Territories in accordance with the provisions of the Immigration Act 1901-25. The number of persons admitted without test includes Australian citizens who have been abroad, and other persons landing in Australia irrespective of the length of time which they propose to stay. Certain persons who are permitted to land (under security for their subsequent departure) pending transshipment to another country are not included. The majority of the persons of Asiatic or other non-European nationality shown in the table are former residents of Australia who have returned from visits abroad, or are persons who have been admitted temporarily under exemption certificates, for business, educational, or other purposes. The Immigration Act 1901-25 does not require any statistical record of the departures from Australia.

It may be mentioned, however, in this connexion, that the Bureau of Census and Statistics, for the purpose of estimating the population of Australia, compiles—from data collected by the Department of Trade and Customs—statistics of both arrivals into and departures from Australia. For this compilation, all persons leaving an overseas ship, and all persons joining an overseas ship, in any Australian port, are counted. Consequently the number of arrivals as recorded respectively under the Immigration Act and by this Bureau are not in complete agreement. During the last five years the number of persons who desired but were not permitted to land was 26 in 1920; 29 in 1921; 18 in 1922; 49 in 1923; and 50 in 1924.

7. **Persons Admitted Without Dictation Test.**—The following table shows the number and nationality of persons admitted during the years 1920 to 1924 without passing the dictation test:—

**PERSONS ADMITTED WITHOUT DICTATION TEST.—NATIONALITIES,
AUSTRALIA, 1920 TO 1924.**

Nationality.	1920.	1921.	1922.	1923.	1924.
EUROPEANS—					
Austrians	3	(c)5	(c)8	(c)2	9
Belgians	90	73	72	84	69
British	(a)95,879	76,518	84,263	85,440	88,335
Danes	189	201	179	172	189
Dutch	699	321	233	219	248
French	785	529	525	378	660
Germans	(b)115	(c)76	(c)86	(c)130	195
Greeks	131	258	472	922	2,028
Italians	631	1,278	3,367	1,739	4,540
Maltese	88	132	373	323	418
Poles	27	51	45	58	111
Portuguese	9	8	2	4	..
Rumanians	10	9	14	14	23
Russians	121	100	116	256	312
Scandinavians	437	487	361	491	383
Spaniards	37	83	51	85	108
Swiss	90	149	169	160	277
Turks .. ..	..	..	4	2	..
Other Europeans	197	344	(d)339	(e)587	(f)2,735
AMERICANS—					
North Americans	1,698	1,577	1,372	1,470	1,400
South Americans	16	35	14	13	27
American Indians	6	..	..	..	..
Negroes	5	6	5	13	11
West Indians .. ..	..	7	3	6	2

(a) Including 11,546 returned troops and nurses. (b) Landed for transshipment or under special authority. (c) Landed on exemption certificates or under special authority. (d) Including 110 Finns and 125 Jugo-Slavs. (e) Including 154 Finns and 240 Jugo-Slavs. (f) Including 374 Finns and 1,933 Jugo-Slavs.

**PERSONS ADMITTED WITHOUT DICTATION TEST.—NATIONALITIES,
AUSTRALIA, 1920 TO 1924—continued.**

Nationality.	1920.	1921.	1922.	1923.	1924.
ASIATICS—					
Arabs	2	4	5	3	16
Chinese	1,753	1,833	1,964	1,974	1,917
Cingalese	12	19	12	12	5
Filipinos	10	13	10	25	15
Hindoos	241	163	213	129	169
Japanese	345	282	390	222	240
Javanese	12	6	8	4	1
Malays	207	44	39	29	23
Syrians	56	39	79	147	288
Timorese	282	34	371	243	316
OTHER RACES—					
Maoris	1	..	..	..	..
Mauritians	5	..	..	..	..
Pacific Islanders	47	46	47	43	50
Papuans	30	170	368	282	365
Unspecified	85	44	39	44	86
Total	104,351	84,944	95,618	95,725	105,571

8. Departures of Persons of Non-European Races.—The following table shows the number of persons of non-European races who left Australia during the years 1920 to 1924 :—

**DEPARTURES OF PERSONS OF NON-EUROPEAN RACES—AUSTRALIA,
1920 TO 1924.**

Nationality.	1920.	1921.	1922.	1923.	1924.
American Negroes ..	11	7	4	4	7
West Indians	10	2	2	7	1
Afghans .. ..	..	..	..	1	2
Arabs	5	4	6	3	4
Chinese	2,115	2,912	2,189	2,310	1,898
Cingalese	11	20	5	10	7
Filipinos	53	19	25	23	14
Hindoos	227	338	194	157	149
Japanese	554	626	359	436	366
Javanese	24	8	4	2	3
Malays	144	209	79	92	43
Pacific Islanders ..	51	43	46	38	57
Papuans	178	82	146	359	282
Others	128	330	154	214	488
Total	3,511	4,600	3,213	3,656	3,321

9. Immigration—States, etc.—The following table shows the immigration into each of the Australian States from 1920 to 1924 :—

IMMIGRATION.—STATES, ETC., 1920 TO 1924.

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N. Ter.	Australia.
1920 ..	69,135	19,302	4,151	4,877	6,803	1	82	104,351
1921 ..	54,578	15,883	4,269	3,143	7,029	6	36	84,944
1922 ..	54,205	22,340	5,948	4,043	9,062	..	20	95,618
1923 ..	51,096	22,867	5,950	4,257	11,538	..	17	95,725
1924 ..	55,718	24,870	6,609	5,562	12,783	20	9	105,571

(C) Passports.

Provision is made in the Immigration Act 1920 for the production of passports by all persons over 16 years of age who desire to enter Australia. Similarly, the Passports Act 1920 provides that no person over the age of 16 years shall leave Australia unless—

- (a) he is the holder of a passport or other document authorizing his departure; and
- (b) his passport has been viséed or indorsed in the prescribed manner for that journey, and the visé or indorsement has not been cancelled.

Among the exceptions to this requirement are natural-born British subjects leaving for New Zealand, Papua, or Norfolk Island; members of the crew of any vessel who sign on in Australia for an oversea voyage and who satisfy an authorized officer that they are by occupation seafaring men; aboriginal natives of Asia, or of any island in the East Indies, or in the Indian or Pacific Oceans. The charge for a Commonwealth passport is 10s., and for a visé 2s.

With regard to (b), the Commonwealth Government has agreed to the inclusion of Australia in reciprocal arrangements for the abolition of visé requirements made by the British Government with the respective Governments of the following countries, viz. :—France, Switzerland, Italy, Belgium, Denmark, Sweden, and Norway.

§ 11. Naturalization.

1. Commonwealth Legislation.—A brief summary of the Commonwealth legislation regarding naturalization is given in Year Book No. 15 (p. 1090).

The “Nationality Act 1920” was amended by the “Nationality Act 1922,” which extends the operation of the principal Act to the Territories of Papua and Norfolk Island, and to any other territories under the authority of the Commonwealth to which the Governor-General by proclamation declares it to extend.

The grant of a certificate of naturalization entitles the recipient to all the rights and privileges, and renders him subject to all the obligations of a natural-born British subject, with the exception that where, by any Commonwealth or State Constitution or Act, a distinction is made between natural-born British subjects and naturalized persons, such distinction shall hold good in the case of all persons naturalized under the Commonwealth Act.

The “Nationality Act 1920” provides that applications for certificates of naturalization must be made to the Governor-General, the qualifications required in an applicant being:—(i) Residence in Australia or a Territory continuously for not less than one year immediately preceding his application for naturalization, and previous residence, either in Australia or in some other part of His Majesty’s dominions, for a period of four years within the last eight years before the application; (ii) Good character and an adequate knowledge of the English language; (iii) Intention to settle in the British Empire.

The applicant is required to furnish the following particulars in support of his application:—His own statutory declaration stating—(a) Name; (b) Age; (c) Birth-place; (d) Occupation; (e) Residence; (f) Length of residence in the British Empire; (g) Intention to settle in the British Empire; (h) Such other particulars as are prescribed. He must also furnish—(a) Newspapers containing copies of an advertisement, as prescribed, of his intention to seek naturalization; (b) Certificates of character from three natural-born British subjects, two of whom must be householders, and the third a Justice of the Peace, Postmaster, State School Teacher, or Police Officer; (c) Satisfactory evidence that he has an adequate knowledge of the English language.

The Governor-General in Council may, in his absolute discretion, and with or without assigning any reason, grant or withhold a certificate of naturalization as he thinks most conducive to the public good; but the issue of a certificate of naturalization will not be effected until the applicant furnishes a certificate signed by a Justice of the High Court of Australia, a State Judge, or a Magistrate, certifying that he has renounced allegiance

to the country of which he was a subject at the time of his application for naturalization, and that he has taken an oath or affirmation of allegiance to the Crown in accordance with the Constitution. The grant of a certificate is made free of charge.

In addition to naturalization by grant of certificate, the Act makes provision for—
(a) Naturalization by marriage; (b) Naturalization by inclusion in certificate granted to parent.

The former relates to the case of a woman who is not herself a British subject, but is married to a British subject; the latter to that of a person who is not a natural-born British subject, but who being under 21 years of age has, at the request of the parent, been included in the certificate granted to him by the Commonwealth. In each instance the person concerned is deemed to be naturalized under the Commonwealth Act.

The Governor-General may revoke a certificate of naturalization on any one of a number of grounds set out in Section 12 of the Nationality Act 1920-22, and the grantee thereupon ceases to be a British subject and is regarded as a subject of the State to which he belonged at the date of issue of the certificate of naturalization.

Where a wife and any minor children have acquired British nationality under the certificate issued to the husband and father, and such certificate is subsequently revoked, the wife and children remain British subjects unless the Governor-General otherwise declares, or unless they themselves elect to make a declaration of alienage.

In accordance with the Act, a list of persons naturalized, with their addresses, is published in the *Commonwealth Gazette* from time to time.

The administration of the Act is carried out by the Home and Territories Department, and the Governor-General is authorized to make such regulations as are necessary or convenient for giving effect to the Act.

2. Certificates Granted.—(i) *Australia.* Particulars regarding the previous nationalities of the recipients of certificates of naturalization issued under the Act during each of the five years 1920 to 1924, and the countries from which such recipients had come, are given in the following table:—

**NATURALIZATION.—COMMONWEALTH CERTIFICATES GRANTED,
1920 TO 1924.**

Previous Nationalities of Recipients.	No. of Certificates Granted.					Countries from which Recipients of Commonwealth Certificates had come.	No. of Certificates Granted.				
	1920.	1921.	1922.	1923.	1924.		1920.	1921.	1922.	1923.	1924.
Italian ..	139	182	200	138	177	Great Britain ..	100	245	201	128	122
Swedish ..	37	48	47	27	37	Italy ..	128	179	188	136	163
Danish ..	55	57	53	42	44	Germany ..	59	342	293	155	151
Russian ..	18	126	139	82	60	America (North) ..	52	87	88	55	44
German ..	67	459	376	196	176	Sweden ..	20	22	15	7	15
Norwegian ..	24	38	38	31	30	Denmark ..	27	26	22	9	21
Greek ..	80	140	138	141	173	Norway ..	15	14	20	16	12
American (North) ..	22	29	23	17	22	Greece ..	43	82	106	85	131
Dutch ..	27	14	18	15	22	France ..	18	40	24	16	25
Swiss ..	29	16	22	13	15	Egypt ..	24	66	41	47	31
French ..	22	41	28	19	33	America (South) ..	..	..	..	16	14
Spanish ..	20	17	16	26	22	Holland ..	..	..	11	6	9
Belgian ..	5	5	4	3	3	Russia ..	..	56	73	43	35
Rumanian ..	2	7	7	4	5	South Africa ..	15	25	13	9	13
Portuguese ..	3	1	2	2	1	Belgium ..	16	31	32	17	2
American (South) ..	..	1	..	1	..	New Zealand ..	15	23	16	17	17
Austrian ..	2	29	20	14	3	Switzerland ..	11	10	9	7	11
Mexican ..	..	..	..	..	..	Spain ..	10	8	14	19	12
Chinese ..	..	..	..	..	..	New Caledonia ..	..	..	..	..	..
Serbian ..	2	2	3	2	3	Argentina ..	..	..	..	..	..
Syrian ..	..	96	64	33	31	Canada ..	..	..	..	6	5
Polish ..	17	52	45	18	24	Finland ..	..	..	4	2	10
Finnish ..	37	34	21	18	16	Other Countries ..	76	255	183	124	121
Others ..	21	115	89	77	66						
Total ..	629	1,511	1,353	920	964	Total ..	629	1,511	1,353	920	964

(ii) *States.* The following table furnishes particulars concerning the States in which the recipients of Commonwealth certificates of naturalization during the years 1920 to 1924 were resident :—

NATURALIZATION.—COMMONWEALTH CERTIFICATES GRANTED IN EACH STATE, ETC., 1920 TO 1924.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Northern Territory.	Australia.
1920 ..	208	136	167	50	61	5	2	629
1921 ..	461	309	427	165	135	12	2	1,511
1922 ..	409	199	381	116	228	17	3	1,353
1923 ..	272	145	290	63	145	3	2	920
1924 ..	280	163	254	75	176	10	6	964

3. *Census Particulars.*—On the Personal Card used at the Census of 4th April, 1921, an inquiry as to naturalization was made, all persons who were British subjects by naturalization being required to indicate the fact by inserting the letter N in the place provided for the purpose on the card. In addition, in checking the cards in the Census Bureau, instructions were given that cases of women naturalized by marriage to British subjects, and of children naturalized by residence with parents who have become British subjects, should be duly taken into account by the insertion of the letter N if originally omitted. The results of the tabulation will be found in the following table :—

NATURALIZATION.—NATURALIZED BRITISH SUBJECTS, CENSUS OF 4th APRIL, 1921.

Particulars.	States.						Territories.		Australia.
	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Northern.	Fed. Cap.	
Males ..	9,300	6,357	9,654	3,098	2,751	568	57	14	31,799
Females ..	3,249	2,434	5,764	1,411	856	223	6	3	13,946
Persons ..	12,549	8,791	15,418	4,509	3,607	791	63	17	45,745

§ 12. Population of Territories.

At the Census of the 4th April, 1921, special arrangements were made to obtain complete and uniform information concerning each of the five Territories of the Commonwealth, viz. :—(1) Northern Territory; (2) Federal Capital Territory; (3) Norfolk Island; (4) Papua; (5) Territory of New Guinea.

The work of Census enumeration in each Territory was carried out under the direction of the Commonwealth Supervisor of Census, the local organization in each Territory being under the control of a Deputy Supervisor of Census stationed in each Territory. On the conclusion of the collection the whole of the material was forwarded to the Census Office, Melbourne, for tabulation in conjunction with the data for Australia. A summary of the population and number of dwellings in each Territory is shown in the following table :—

POPULATION AND DWELLINGS.—TERRITORIES, 4th APRIL, 1921.

(EXCLUSIVE OF FULL-BLOOD ABORIGINALS IN THE NORTHERN AND FEDERAL CAPITAL TERRITORIES AND OF THE INDIGENOUS POPULATION OF PAPUA AND NEW GUINEA).

Territory.	Population.			Dwellings.			Total.
	Males.	Females.	Persons.	Occu- pied.	Unoccu- pied.	Being Built.	
Northern Territory ..	2,821	1,046	3,867	1,074	138	1	1,213
Federal Capital Territory ..	1,567	1,005	2,572	526	29	..	555
Norfolk Island ..	339	378	717	168	22	3	193
Papua ..	1,408	670	2,078	672	43	4	719
Territory of New Guinea ..	2,502	671	3,173	1,056	18	..	1,074

§ 13. The Aboriginal Population.

In Official Year Book No. 17, pp. 951 to 961, a brief account was given of the Australian aboriginal population, its origin, its numbers as estimated from time to time, and the steps taken for its protection. Pages 918 and 919 of this issue contain a statement showing the numbers of full-blood and half-caste aboriginals in each of the States and Territories of Australia at successive periods.

§ 14. The Chinese in Australia.

1. **General.**—After the cessation in 1840 of transportation to Australia, there was a shortage of labour; and attention was thereupon directed towards India as a source of supply. It is recorded that in 1839, 1,283 indentured Indian labourers were obtained by 111 pastoralists. A few years later employers in New South Wales brought down coolies from China, and it is known that by 1849, 270 Chinese had been introduced. No complete record was kept of the arrivals of Chinese during the next few years; but they must have been fairly numerous, since the Consul at Amoy wrote in 1852 that 2,666 Chinese had been taken thence to Australia, and of these 1,438 left in 1851. The drifting of these people to the mining fields aroused public protest, and further importation of Chinese labour was thereupon prohibited. Originally the number of Chinese arriving on their own account was small, only 28 having arrived in New South Wales during the three years ending 1849. This, however, was completely changed by the discovery of gold, which to a large extent was made known in Chinese seaport towns by shipping companies engaged in passenger traffic.

2. **New South Wales.**—Attracted by the gold discoveries, the Chinese in the latter half of the fifties rapidly increased in New South Wales, and at the taking of the census in 1861, they numbered nearly 13,000. This influx resulted in the passing of a Chinese Immigration Restriction Act in November, 1861, on similar lines to the measure passed in Victoria six years earlier. By this Act a vessel was not allowed to bring more than

one Chinese immigrant for every 10 tons register; a residence tax was imposed, and the right to naturalization was withheld from natives of China. Later on, owing to the gradual decline in the number of Chinese immigrants, it was considered safe to remove all restrictions, and the Act of 1861 was repealed in 1867. The corresponding Acts in Victoria and South Australia had already been repealed several years earlier.

In 1880 and 1881, at the instigation of the Government of New South Wales, an Inter-colonial Conference was held in Melbourne to discuss the question of Chinese immigration. As a result of this conference, which terminated its sittings in Sydney in the following year, uniform restrictive legislation was introduced by all the colonies except Tasmania. The causes leading up to this conference were: (i) A considerable increase of Chinese in the north-east of Australia; (ii) growing opposition amongst the working classes to Chinese competition in the labour market; (iii) outbreaks of small-pox epidemics ascribed to Chinese immigrants, and cases of leprosy occurring amongst them; (iv) fear of a large influx of Chinese as a result of the measures adopted by the United States of America to exclude them from the Pacific States.

The steps taken in 1881 resulted in a considerable reduction in the arrivals of Chinese. Nevertheless the restrictions were evaded to some extent, and large numbers landed in the Northern Territory, which was outside the barriers raised against them. In 1888, therefore, another Conference was held, and further restrictions were introduced. In New South Wales the passenger limitation was fixed at one immigrant to every 300 tons register.

The following table shows the numbers of Chinese in New South Wales at successive periods:—

NEW SOUTH WALES—NUMBER OF CHINESE, 1856 to 1921.

Year.	Full-Blood.			Half-Caste.		
	Males.	Females.	Persons.	Males.	Females.	Persons.
1856	1,800	6	1,806	<i>a</i>	<i>a</i>	<i>a</i>
1861	12,986	2	12,988	<i>a</i>	<i>a</i>	<i>a</i>
1871	7,208	12	7,220	<i>a</i>	<i>a</i>	<i>a</i>
1881	10,141	64	10,205	<i>a</i>	<i>a</i>	<i>a</i>
1891	13,048	109	13,157	442	425	867
1901	10,063	159	10,222	527	514	1,041
1911	7,942	284	8,226	561	571	1,132
1921	6,903	379	7,282	705	689	1,394

(a) Not available.

3. Victoria.—The greatest influx of Chinese immigrants was, naturally, to Victoria, where the richest goldfields were located. In consequence of friction between the European and Chinese gold-miners, the Government in the beginning of 1855 appointed a Royal Commission to report on the matter, and the Commissioners recommended a restriction in the number of Chinese to be allowed entry. In June of the same year "An Act to make Provisions for certain Immigrants" was passed, and the number of Chinese passengers that could be brought to the colony in any vessel was thereunder limited to one for every 10 tons registered tonnage, while a capitation tax of £10 was imposed. In 1857 a Residence Tax of £1 per month—later reduced to £4 a year—was imposed on Chinese residents. In 1862 the Residence Tax was abolished, and the passenger limitations temporarily suspended. In 1865 the Act, which was considered to be no longer necessary, was repealed. After the Intercolonial Conference in 1880–81, restrictive measures were again adopted, and after the 1888 Conference, they were made more stringent. In the case of Victoria the passenger limitation was fixed at one Chinese passenger to every 500 tons of a ship's burthen.

The numbers of Chinese in Victoria at intervals from 1854 to 1921 are shown below :—

VICTORIA—NUMBER OF CHINESE, 1854 to 1921.

Year.	Full-Blood.			Half-Caste.		
	Males.	Females.	Persons.	Males.	Females.	Persons.
1854	2,341	..	2,341	<i>a</i>	<i>a</i>	<i>a</i>
1857	25,421	3	25,424	<i>a</i>	<i>a</i>	<i>a</i>
1861	24,724	8	24,732	<i>a</i>	<i>a</i>	<i>a</i>
1871	17,795	31	17,826	<i>a</i>	<i>a</i>	<i>a</i>
1881	11,795	164	11,959	74	95	169
1891	8,355	134	8,489	417	471	888
1901	6,236	111	6,347	504	498	1,002
1911	4,491	216	4,707	465	429	894
1921	2,918	244	3,162	515	502	1,017

(a) Not available.

4. **Queensland.**—The experience in Queensland following on the discovery of gold was similar to that of New South Wales and Victoria. In 1875 the Government of Queensland notified the Governor of Hong Kong that it proposed to quarantine all vessels coming from China to Cooktown (the port for the Palmer goldfields), and to place disabilities on Chinese at the goldfields. In 1876, by an amendment to the Goldfields Act, the Chinese had to pay heavier licence fees to mine and carry on business than those exacted from white miners and traders. Assent to this measure was at first refused by the Crown, but it became law in 1877. A further amendment in 1878 excluded Chinese for 3 years from any new goldfield unless an Asiatic or an African had discovered it. At the same time, the Chinese were encouraged to return home by the refund of the entrance tax if they left within 3 years, and if during their stay they had not violated the law or been an expense to the State. In 1884, by a further amendment of the law, the capitation fee was raised to £30, and the passenger limitation of ships from 1 to 10 tons to 1 to 50 tons. After the Conference in 1888 Queensland passed a new Act on similar lines to those in force in the Southern Colonies.

The number of Chinese in Queensland at various periods from 1861 to 1921 is shown in the appended table :—

QUEENSLAND—NUMBER OF CHINESE, 1861 to 1921.

Year.	Full-Blood.			Half-Caste.		
	Males.	Females.	Persons.	Males.	Females.	Persons.
1861	537	1	538	<i>a</i>	<i>a</i>	<i>a</i>
1864	628	..	628	<i>a</i>	<i>a</i>	<i>a</i>
1868	2,621	8	2,629	<i>a</i>	<i>a</i>	<i>a</i>
1881	11,206	23	11,229	<i>a</i>	<i>a</i>	<i>a</i>
1891	8,497	27	8,524	30	20	50
1901	7,637	35	7,672	400	400	800
1911	5,783	212	5,995	355	364	719
1921	3,806	340	4,146	515	442	957

(a) Not available.

5. **South Australia.**—To evade the Victorian Act of 1855 for the restriction of Chinese immigration, the shipping companies landed their Chinese passengers in Guichen Bay, South Australia, whence they travelled overland to the Victorian goldfields. With a view to prevent this, and thereby aid the neighbouring colony in its efforts to check the rapid growth of the Chinese population, South Australia in 1857 passed an Act almost identical with the Act passed by Victoria two years earlier. This Act being

considered superfluous was repealed in 1861. After the intercolonial conference in 1880-81, South Australia copied Queensland's Act of 1878, but exempted the Northern Territory from its provisions. In 1888 the restrictive measures were extended to the Northern Territory, and so completed the barrier against the entry of Chinese into Australia.

The following table shows the number of Chinese in South Australia at Census periods from 1881 to 1921:—

SOUTH AUSTRALIA.—NUMBER OF CHINESE, 1881 to 1921.

Year.	Full-Blood.			Half-Caste.		
	Males.	Females.	Persons.	Males.	Females.	Persons.
1881	346 ^a	1 ^a	347	<i>b</i>	<i>b</i>	<i>b</i>
1891	180	2	182	3 ^a	2 ^a	5 ^a
1901	270	17	287	24 ^a	24 ^a	48 ^a
1911	241	14	255	50	54	104
1921	243	8	251	45	71	116

(*a*) Estimated.

(*b*) Not available.

6. **Western Australia.**—The cessation of transportation and the failure to attract free immigrants of the labouring class led the Government of the then Crown colony of Western Australia to experiment in 1878 with the introduction of 50 Chinese coolies, and it was proposed to bring in 50 others in 1880. Objection to this procedure was taken by the other colonies who unsuccessfully sought the intervention of the Home Government. Meanwhile gold was found in the Kimberley district, and Western Australia fearing an inrush of Chinese fell into line with the other colonies by adopting restrictive measures in 1886. Free entry was allowed only to the few Chinese who might come in under the provisions of the Imported Labourers Registry Act of 1884. As a result of the Intercolonial Conference of 1888 an Act was passed embodying the restrictive measures agreed upon thereat. The Imported Labourers Registry Act, however, made it possible for some Chinese to enter under defined conditions, but, as they continued to drift southwards after their term of indenture in the north had expired, the passenger limitation of 1 to 500 tons was applied in the case of indentured Chinese also. By an amendment passed in 1897 they were not allowed to proceed south of 27° S. Lat.

The number of Chinese in Western Australia in the Census years 1881 to 1921 was as follows:—

WESTERN AUSTRALIA.—NUMBER OF CHINESE, 1881 to 1921.

Year.	Full-Blood.			Half-Caste.		
	Males.	Females.	Persons.	Males.	Females.	Persons.
1881	144	1	145	<i>a</i>	<i>a</i>	<i>a</i>
1891	914	3	917	<i>a</i>	<i>a</i>	<i>a</i>
1901	1,503	18	1,521	23	25	48
1911	1,775	37	1,812	33	27	60
1921	1,278	47	1,325	70	48	118

(*a*) Not available.

7. **Tasmania.**—Although at that time the number of Chinese entering Tasmania was small, the colony was represented at the Intercolonial Conference in 1880-81, and agreed to adopt the Queensland restrictive measure of 1878. No immediate action was taken, however, but in 1885 the development of tin and gold mining attracted Chinese miners, and, despite the fact that they numbered less than a thousand, the usual outcry for

protection of white labour arose. In consequence, an Act was passed at the end of 1887 similar to those in force in New South Wales and Victoria, but the additional legislation adopted by the other colonies in 1888 was never enacted in Tasmania.

The number of Chinese in Tasmania at Census periods from 1881 to 1921 is given hereunder.

TASMANIA.—NUMBER OF CHINESE, 1881 to 1921.

Year.	Full-Blood.			Half-Caste.		
	Males.	Females.	Persons.	Males.	Females.	Persons.
1881	842	2	844	..	..	..
1891	931	8	939	62	55	117
1901	482	24	506	54	49	103
1911	400	27	427	50	52	102
1921	247	15	262	36	23	59

8. Northern Territory.—In 1874 the South Australian Government introduced 200 Chinese coolies into the Northern Territory to assist in promoting tropical agriculture, while the discovery of gold resulted in many others coming on their own account. The construction of the railway from Darwin to Pine Creek in 1887–88 led to a further increase, and there were at that time upwards of 4,000 Chinese in the Territory. As the result of representations made to South Australia by the other colonies, the operation of the Act passed in 1888 to restrict Chinese immigration was extended to the Northern Territory.

The number of Chinese in the Northern Territory at the date of each of the last five Censuses is given hereunder in the following table :—

NORTHERN TERRITORY.—NUMBER OF CHINESE, 1881 to 1921.

Year.	Full-Blood.			Half-Caste.		
	Males.	Females.	Persons.	Males.	Females.	Persons.
1881	3,800	4	3,804	<i>a</i>	<i>a</i>	<i>a</i>
1891	3,598	15	3,613	46	45	91
1901	2,962	110	3,072	24 <i>b</i>	24 <i>b</i>	48 <i>b</i>
1911	1,224	107	1,331	4	4	8
1921	609	113	722	5	3	8

(a) Not available.

(b) Estimated.

9. Australia.—According to the various Censuses taken, the total number of Chinese in Australia never advanced beyond 40,000. It is, of course, possible that this figure was exceeded during an intercensal period, but it is reasonable to suppose that they were never greatly in excess of the number specified. The effect of the restrictive measures adopted by Victoria in 1855, and by New South Wales in 1861, is shown by the reduced numbers in those States in 1871. The many Chinese who entered Queensland and the Northern Territory during the seventies counteracted the decline in the southern States, and the figure for the whole of Australia in 1881 is probably very near the maximum number at any time. Since 1881 the decline in Australia has been consistent, and as only 2,026 of the 17,157 Chinese recorded in 1921 were born in this country, the decrease is likely to continue.

Up to the last decade of the 19th century the action of the various colonies towards Chinese immigration was directed to avoiding the evils which were supposed to be connected with a large Chinese element in the community; between 1891 and 1901 the feeling evinced gradually developed the "White Australia" policy which excludes all coloured people. On the consummation of federation this policy was expressed in the Commonwealth Immigration Act of 1901.

Although particulars relating to Chinese are available for some of the States from earlier dates, information for all States is not available prior to 1881. From that date onward the numbers ascertained from each Census are given in the following table :—

AUSTRALIA.—NUMBER OF CHINESE, 1881 to 1921.

Year.	Full-Blood.			Half-Caste.		
	Males.	Females.	Persons.	Males.	Females.	Persons.
1881	38,274	259	38,533	<i>a</i>	<i>a</i>	<i>a</i>
1891	35,523	298	35,821	<i>a</i>	<i>a</i>	<i>a</i>
1901	29,153	474	29,627	1,556	1,534	3,090
1911	21,856	897	22,753	1,518	1,501	3,019
1921	16,011	1,146	17,157 ^b	1,884	1,771	3,655

(a) Not available.

(b) Includes 7 males resident in the Federal Capital Territory.

10. **Half-Castes.**—Though many of the Chinese who came to Australia settled here permanently, the fact that so few brought their womenfolk with them indicates that the majority had intended, sooner or later, to return to China. The dearth of women of their own race, however, induced mating with European females where racial animosity could be overcome. According to the Census of 1911, only 801 Chinese were recorded as living with wives. Of the latter, 181 were born in China, 485 in Australia, 63 in England, 15 in Scotland, and 22 in Ireland. Of those born in Australia the majority would probably be of Chinese or mixed descent.

The extent to which Chinese blood has been mixed with the white race is shown by the figures for half-castes in the preceding tables.

CHAPTER XXV.

VITAL STATISTICS.

§ 1. Births.

1. Births, 1920 to 1924.—The number of male and female births and the total births registered in Australia during the years 1920 to 1924 are shown in the tables hereunder. The numerical relation which these births bear to the population, and various other associated features, are given in later tables.

MALE BIRTHS, 1920 TO 1924.

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	North. Ter.	Fed. Cap. Ter.	Aus- tralia.
1920	27,691	18,647	10,537	6,178	4,256	2,908	31	8	70,256
1921	28,005	18,288	10,638	6,122	3,988	2,944	39	15	70,039
1922	28,218	18,738	10,263	6,150	4,163	2,995	38	17	70,582
1923	27,713	18,565	10,163	5,976	4,014	2,888	40	6	69,365
1924 { Single births	26,833	18,089	9,837	5,838	4,134	2,623	29	15	67,398
{ Twins ..	509	411	212	99	81	76	..	..	1,388
{ Triplets ..	8	..	1	4	..	1	..	..	14
{ Total births	27,350	18,500	10,050	5,941	4,215	2,700	29	15	68,800

FEMALE BIRTHS, 1920 TO 1924.

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	North. Ter.	Fed. Cap. Ter.	Aus- tralia.
1920	26,251	17,566	9,719	5,850	3,893	2,832	32	7	66,150
1921	26,631	17,303	9,691	5,852	3,819	2,811	40	12	66,159
1922	26,952	17,550	9,724	5,851	3,968	2,822	32	15	66,914
1923	26,356	17,312	9,819	5,716	3,840	2,769	32	13	65,857
1924 { Single births	25,832	17,290	9,476	5,524	4,023	2,639	26	26	64,836
{ Twins ..	517	341	180	125	63	42	2	..	1,270
{ Triplets ..	(d) 6	9	2	2	..	2	..	..	21
{ Total births	26,355	17,640	9,658	5,651	4,086	2,683	28	26	66,127

TOTAL BIRTHS, 1920 TO 1924.

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	North. Ter.	Fed. Cap. Ter.	Aus- tralia.
1920	53,942	36,213	20,256	12,028	8,149	5,740	63	15	136,406
1921	54,636	35,591	20,329	11,974	7,807	5,755	79	27	136,198
1922	55,170	36,288	19,987	12,001	8,131	5,817	70	32	137,496
1923	54,069	35,877	19,982	11,692	7,854	5,657	72	19	135,222
1924 { Single births	52,665	35,379	19,313	11,362	8,157	5,262	55	41	132,234
{ Twins ..	(c) 1,026	(b) 752	(a) 392	224	(b) 144	118	2	..	2,658
{ Triplets ..	(d) 14	9	3	6	..	3	..	..	35
{ Total births	53,705	36,140	19,708	11,592	8,301	5,383	57	41	134,927

(a) Two stillborn twins not included.
(b) Four stillborn twins not included.

(c) Six stillborn twins not included.
(d) One stillborn triplet not included.

2. **Birth Rates.**—The next table gives the crude birth rates in each of the States and Territories and in Australia as a whole for the years 1920 to 1924.

CRUDE BIRTH RATE(a), 1920 TO 1924.

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W.A.	Tas.	North. Ter.	Federal Capital Territory.	Aus- tralia.
1920	26.09	23.95	27.15	24.72	24.69	27.29	14.96	6.90	25.45
1921	25.93	23.16	26.64	24.08	23.39	26.98	20.23	10.87	24.95
1922	25.67	23.10	25.59	23.71	23.94	27.08	19.16	11.37	24.69
1923	24.68	22.31	24.89	22.60	22.55	26.27	19.94	5.73	23.77
1924	24.11	22.01	23.87	21.88	23.09	25.07	15.82	10.65	23.24

(a) Number of births per 1,000 of the mean annual population.

Notwithstanding some undulating movements at different times, the crude birth rate of Australia has shown a constant decline for many years, and if the figures for 1919 are discarded as the result of abnormal conditions arising from the war, the rate of 23.24 per 1,000 persons is the lowest yet recorded.

The most effective factor in determining the crude birth rate is the proportion of *married* women of child-bearing age in the community, but as the fecundity of women varies with age, the birth rate per 1,000 married women will vary according to the age composition of the group, and, other things being equal, the rate generally should be highest where the average age of married women is lowest. For the purposes of the following table the child-bearing age has been taken as from 15-44 years inclusive, and all births of which the mothers were stated to be over 45 years have been counted in the group 40-44.

To compare the relative increases to the populations of different countries accruing from births, it is of course necessary to take account of the ex-nuptial births, which vary very largely in relation to nuptial births between different countries and between different localities in the same country.

A thoroughly effective comparison of the birth rates of the different States can be made at Census periods only, because at other times accurate information is unobtainable regarding the masculinity and the age composition of the population.

The following table gives for each of the States and for Australia some of the more important factors which affect the birth rates, and also the birth rates computed on various bases as follows:—Births per 1,000 of the population (crude); births per 1,000 women of child-bearing age; nuptial births per 1,000 married women of child-bearing age; births per 1,000 married women of child-bearing age corrected for inequalities in the age composition by taking the female population of Australia as a whole for a standard; and ex-nuptial births per 1,000 unmarried women aged 15-44 inclusive. The results are obtained from the births during the years 1920, 1921, and 1922 in relation to the age and conjugal condition of the population at the time of the Census of the 4th April, 1921.

The rates obtained from these computations place Tasmania first, and Queensland second, notwithstanding that the proportions of married women of child-bearing age in their populations were lower than the average for Australia. Some compensation to this disadvantage in its effect on the crude birth rate was provided by the relatively low average age of the married women in these States, and by the large proportion of ex-nuptial births. The relatively low proportion of married women of child-bearing age in Queensland was due to the large number of adult males engaged in localities unsuited to women, a circumstance which accounts for the high masculinity of the population.

In Tasmania the small proportion of married women in the total population arises from conditions directly opposite to those in Queensland. In Tasmania the numbers of the sexes were almost equal. Large numbers of the young adults emigrate to the mainland, leaving a population with abnormally large proportions of very young and very old. Although the proportion of married women of child-bearing age was lower in Tasmania than in Queensland, and the average age was the same in both States, Tasmania had the greater weight in the more productive age-groups—from 15 to 24 years.

Western Australia, though fifth in order of the crude birth rates, takes third place when the rates are computed in relation to women only. This change in position is due to the high masculinity. Notwithstanding that the average age of married women of reproductive ages was higher than in any other State, the uncorrected birthrate for nuptial births per 1,000 married women was higher than in New South Wales, Victoria, or South Australia. The adjustment for age improves the status of Western Australia very considerably, though not sufficiently to alter the sequence of its position.

The crude birth rate placed New South Wales third, but on the adjusted rate per 1,000 married women that State takes fifth place. The high position of New South Wales as determined by the crude birth rates was attained by the large proportion in the population of married women of child-bearing age rather than by their productiveness.

Victoria was the only State with an excess of females in its population, and the proportion to the total population of women aged 15-44 was the largest among the States, but as the proportion of these who were married was the lowest, the primary factor in the crude birth rate, viz., the proportion to the total population of married women of reproductive ages was the smallest.

The difference between the adjusted birth rates per 100 married women of child-bearing ages for New South Wales and Victoria was very small, and the proportions of ex-nuptial to all births in these States were almost identical.

Notwithstanding that 12.53 per cent. of the total population consisted of married women of child-bearing age—against an average of 12.20 for Australia—South Australia took fourth place in the order of crude birth rates. The advantage from this high proportion of potentially productive women was to some extent counteracted by their average age being somewhat above the average for Australia. The position was also affected by the very small proportion of ex-nuptial births. The number of nuptial births per 100 women of child-bearing age in South Australia, represented 18.71, as against 19.65 for Australia, although the difference is somewhat reduced by the adjusting process which makes the rate for South Australia 18.99 as against the Australian rate of 19.65.

BIRTH RATES, AND FACTORS AFFECTING THEM.—AVERAGE OF YEARS 1920, 1921, 1922.

Subject.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Aus- tralia.
Crude birth rate per 1,000 persons ..	25.99	23.54	26.72	24.23	24.14	26.99	25.15
Birth rate per 100 women 15-44 incl. ..	11.04	9.79	11.83	10.25	11.05	11.91	10.74
Birth rate per 100 married women 15-44 incl. (a)	19.39	19.29	21.26	18.71	19.62	21.83	19.65
Birth rate per 100 married women 15-44 incl. (corrected for age variation) ..	19.14	19.44	20.77	18.99	20.44	21.24	19.65
Ex-nuptial births—per cent. on all births ..	4.82	4.84	5.00	3.28	4.02	5.11	4.69
Ex-nuptial births per 100 unmarried women 15-44 incl. ..	1.16	0.92	1.26	0.72	0.92	1.26	1.05
Women 15-44 incl.—per cent. all persons ..	23.54	24.02	22.57	23.65	21.83	22.67	23.41
Average age of all women 15-44 incl. ..	28.67	28.61	28.09	28.73	28.45	28.10	28.54
Married women 15-44 incl.—per cent. on all persons ..	12.75	11.61	11.93	12.53	11.81	11.73	12.20
Average age of married women 15-44 incl. ..	32.34	32.74	32.16	32.67	33.02	32.16	32.48

(a) Nuptial births only.

The following figures gives a comparison for Australia, at Census periods from 1880, of the total births per 1,000 women (married and unmarried) and of the nuptial births per 1,000 married women of ages 15 to 44 inclusive :—

Particulars.	1880-82.	1890-92.	1900-2.	1910-12.	1920-22.
Births per 1,000 women aged 15-44 ..	169.7	153.8	117.3	117.2	107.4
Nuptial births per 1,000 married women 15-44 ..	321.0	332.0	235.8	236.0	196.5

3. *Birth Rates of Various Countries.*—(i) *Crude Rates.* A comparison with other countries shows that the Australian States occupy a midway position, which is however, counterbalanced by a still lower position in regard to their death rates, as evidenced in the table hereinafter in the section dealing with "Deaths."

CRUDE BIRTH RATES(a).—VARIOUS COUNTRIES.

Country.	Year.	Rate.	Country.	Year.	Rate.
Russia, European ..	1923	42.5	Canada (excluding		
Bulgaria ..	1921	40.7	Quebec) ..	1924	23.1
Chile ..	1923	39.4	Western Australia ..	1924	23.1
Ceylon ..	1923	39.1	United States (b) ..	1924	22.5
Rumania ..	1922	37.5	Austria ..	1923	22.3
Jamaica ..	1922	37.3	Northern Ireland ..	1924	22.2
Quebec (Canada) ..	1922	35.1	Victoria ..	1924	22.0
Japan ..	1923	34.9	Denmark ..	1924	21.9
Spain ..	1924	29.9	Scotland ..	1924	21.9
Italy ..	1923	29.3	South Australia ..	1924	21.9
Czecho-Slovakia ..	1923	27.3	Norway ..	1924	21.7
Union of South Africa			New Zealand ..	1924	21.6
(whites) ..	1924	26.5	Germany ..	1924	21.1
Hungary ..	1924	26.3	Belgium ..	1923	20.7
Uruguay ..	1923	25.4	Prussia ..	1923	20.6
Finland ..	1923	25.4	Irish Free State ..	1924	20.1
Tasmania ..	1924	25.1	Switzerland ..	1923	19.4
Netherlands ..	1924	24.9	Great Britain ..	1924	19.3
New South Wales ..	1924	24.1	France ..	1924	19.0
Queensland ..	1924	23.9	England and Wales..	1924	18.8
Australia ..	1924	23.2	Sweden ..	1924	18.1
Ontario (Canada) ..	1924	23.2			

(a) Number of births per 1,000 of the mean population. (b) Figures for "provisional birth-registration area," which includes about 85 per cent. of the population.

(ii) *Nuptial Birth Rates at Child-bearing Ages.* The wide discrepancies between the crude birth rates of the various countries are, to some extent, due to differences in sex and age constitution and in conjugal condition. If the birth rates be calculated per 1,000 women of child-bearing ages, the comparison gives more reliable results. The comparative results given in the following table have been taken from the *Annuaire International de Statistique*, and are based on ages 15 to 49 years. Australia with a rate of 198 being, again, midway between maximum and minimum:—

NUPTIAL BIRTH RATES PER 1,000 MARRIED WOMEN AGED 15 TO 49 YEARS.—VARIOUS COUNTRIES.

Country.	Period.	Rate.	Country.	Period.	Rate.
Bulgaria ..	1910-11	280	Australia ..	1906-15	198
Ireland ..	1909-12	250	Hungary ..	1906-15	198
Netherlands ..	1905-14	233	Germany ..	1907-14	196
Finland ..	1906-15	230	Sweden ..	1903-13	196
Italy ..	1907-14	226	Denmark ..	1906-15	191
Norway ..	1907-14	224	New Zealand ..	1906-15	188
Austria ..	1903-13	219	Switzerland ..	1906-15	184
Spain ..	1906-15	218	England and Wales..	1906-15	171
Prussia ..	1907-14	204	Belgium ..	1908-13	161
Scotland ..	1906-15	202	France ..	1910-11	114

4. *Masculinity of Births.*—(i) *General.* The masculinity of births, i.e., the excess of males over females per 100 births registered, during the last five years varied from 0.32 in Tasmania in 1924 to 4.66 in Queensland in 1921. On account of the smallness of the numbers, the returns from the Northern Territory and the Federal Capital Territory have not been taken into consideration. The following table, which gives the values for the States and Australia for 1920 to 1924, shows that for Australia the masculinity of births has fallen each year since 1920.

MASCUINITY(a) OF BIRTHS REGISTERED, 1920 TO 1924.

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Northern Territory.	Federal Capital Territory.	Australia.
1920 ..	2.67	2.99	4.04	2.73	4.45	1.32	-1.59	6.67	3.01
1921 ..	2.51	2.77	4.66	2.25	2.16	2.31	-1.27	11.11	2.85
1922 ..	2.29	3.27	2.70	2.49	2.40	2.97	8.77	6.25	2.67
1923 ..	2.51	3.49	1.72	2.22	2.22	2.10	11.11	-36.84	2.59
1924 ..	1.85	2.38	1.99	2.50	1.55	0.32	1.75	-26.83	1.98

(a) Excess of males over females per 100 total births.

NOTE.—The minus sign (—) denotes an excess of females over males per 100 total births.

(ii) *Masculinity of Ex-nuptial Births.* The masculinity of ex-nuptial births was as follows:—

MASCUINITY(a) OF EX-NUPTIAL BIRTHS, 1920 TO 1924.

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Northern Territory.	Federal Capital Territory.	Australia.
1920 ..	3.87	8.20	11.52	-2.22	5.36	-3.63	-6.67	..	5.60
1921 ..	3.94	2.72	-0.94	6.10	6.03	1.26	15.38	..	2.96
1922 ..	3.11	1.75	6.44	9.55	3.26	-2.64	-5.88	..	3.37
1923 ..	2.54	2.07	2.13	0.00	-5.96	-3.98	10.34	-100.00	1.72
1924 ..	3.21	-0.96	0.19	2.54	2.14	-5.26	7.69	100.00	1.20

(a) Excess of males over females per 100 total births.

NOTE.—The minus sign (—) denotes an excess of females over males per 100 total births.

Although the general tendency of the change in the sex composition of the ex-nuptial births has been the same as in the total births, the results in the smaller States do not show the same consistency in the former as in the latter. This is due, no doubt, to the relatively small numbers involved.

(iii) *Masculinity of Nuptial and Ex-nuptial Births, Various Countries.*—There is ordinarily a very small difference between the masculinity of nuptial and ex-nuptial births. Thus, according to the following table, for the period about 1906 to 1913, the masculinity in various countries ranged from 4.63 to 1.91, and from 5.90 to 0.06 for nuptial and ex-nuptial births respectively.

MASCULINITY OF BIRTHS.—VARIOUS COUNTRIES.

Country.	Period.	Masculinity of Births.(a)		Country.	Period.	Masculinity of Births.(a)	
		Nuptial Live Births.	Ex-nuptial Live Births.			Nuptial Live Births.	Ex-nuptial Live Births.
Spain ..	1906-13	4.63	5.90	Ireland ..	1906-12	2.61	1.63
Portugal ..	1906-10	3.93	0.06	New Zealand	1906-13	2.59	2.57
Finland ..	1906-13	3.03	2.09	Australia ..	1906-13	2.52	2.27
Sweden ..	1906-13	2.95	3.27	Netherlands	1906-13	2.49	1.53
Hungary ..	1906-13	2.86	2.02	Denmark ..	1906-13	2.43	2.22
Norway ..	1906-13	2.79	2.98	Switzerland	1906-13	2.38	1.21
Prussia ..	1906-13	2.79	2.12	Japan ..	1906-13	2.32	0.87
Russia, Euro- pean ..	1906-09	2.77	2.00	France ..	1906-11	2.21	1.59
Austria ..	1906-13	2.76	2.73	Chile ..	1906-13	2.20	2.81
Germany ..	1906-13	2.71	2.29	Belgium ..	1906-13	2.08	1.31
Italy ..	1906-13	2.64	2.29	Scotland ..	1906-13	2.05	2.14
Serbia ..	1906-10	2.62	2.86	England and Wales ..	1906-13	1.91	2.07

(a) Excess of males over females per 100 total births.

5. *Ex-nuptial Births.*—(i) *General.* The number of ex-nuptial births reached its maximum, 7,438, in 1913, but it has since fallen considerably. On the average of the five years 1910-14, the number of ex-nuptial births in Australia was 7,171, while for the period 1920-24 it was only 6,350, a decline of 11.4 per cent., whereas the annual average total births for the same period increased by 5.3 per cent.

It is, of course, possible that the number of ex-nuptial births is somewhat understated, owing to diffidence in proclaiming the fact of ex-nuptiality, and it is not unlikely that the majority of unregistered births are ex-nuptial.

EX-NUPTIAL BIRTHS, 1920 TO 1924.

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Northern Territory.	Federal Capital Territory.	Australia.
1920 ..	2,582	1,902	1,033	450	317	303	15	..	6,602
1921 ..	2,640	1,725	1,062	377	315	318	26	..	6,463
1922 ..	2,667	1,602	932	356	337	265	17	..	6,176
1923 ..	2,676	1,595	1,079	360	285	251	29	1	6,276
1924 ..	2,589	1,668	1,052	355	327	228	13	1	6,233

(ii) *Rate of Ex-nuptiality, 1920 to 1924.* The rate of ex-nuptiality, i.e., the percentage of ex-nuptial on total births fell steadily from 4.84 in 1920 to 4.62 in 1924. On the basis of the figures given in the preceding sub-section the ex-nuptial rate fell from 5.55 per cent. of all births during the years 1910-14 to 4.67 per cent. for the years 1920-24.

PERCENTAGE OF EX-NUPTIAL ON TOTAL BIRTHS, 1920 TO 1924.

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Northern Territory.	Federal Capital Territory.	Australia.
	%	%	%	%	%	%	%	%	%
1920 ..	4.79	5.25	5.10	3.74	3.89	5.28	23.81	..	4.84
1921 ..	4.83	4.85	5.22	3.15	4.03	5.53	32.91	..	4.75
1922 ..	4.83	4.41	4.66	2.97	4.14	4.56	24.29	..	4.49
1923 ..	4.95	4.45	5.40	3.08	3.63	4.44	40.28	5.26	4.64
1924 ..	4.82	4.62	5.34	3.06	3.94	4.24	22.81	2.44	4.62

A comparison of greater significance is obtained by calculating the number of ex-nuptial births per thousand of the single and widowed female population between the ages of 15 and 45. The calculation has been made for Australia for the last five Census periods for which the information is available, and covers in each case the Census year, together with the year immediately preceding and the year immediately following. The number of ex-nuptial births per 1,000 unmarried women of ages 15 to 45 has been found to be as follows:—Years 1880–82, 14.49; years 1890–92, 15.93; years 1900–02, 13.30; years 1910–12, 12.53; years 1920–22, 10.50. The comparative results given in the following table have been taken from the *Annuaire International de Statistique*, Vols. II., and V., and are based on ages 15 to 49 years:—

**EX-NUPTIAL BIRTHS PER 1,000 UNMARRIED WOMEN AGED 15 TO 49 YEARS.—
VARIOUS COUNTRIES.**

Country.	Period.	Rate.	Country.	Period.	Rate.
Hungary	1906–15	38	Norway	1907–14	13
Austria	1908–13	30	Scotland	1906–15	13
Sweden	1908–13	26	Australia	1906–15	12
Denmark	1906–15	24	Belgium	1908–13	12
Germany	1907–14	23	New Zealand	1906–15	9
Prussia	1907–14	21	Switzerland	1906–15	8
Finland	1906–15	17	England and Wales ..	1906–15	7
France	1901–11	16	Netherlands	1905–14	5
Italy	1907–14	14	Ireland	1909–12	4
Spain	1906–15	14	Bulgaria	1910–11	4

(iii) *Comparison of Rates.* The following table has been prepared to show the relative movements of the ex-nuptial and the nuptial births in relation to the total population:—

**CRUDE EX-NUPTIAL, NUPTIAL, AND TOTAL BIRTH RATES (a).—AUSTRALIA,
1920 TO 1924.**

Rates.	1920.	1921.	1922.	1923.	1924.
Ex-nuptial	1.24	1.18	1.11	1.10	1.07
Nuptial	24.50	23.77	23.58	22.67	22.17
Total	25.74	24.95	24.69	23.77	23.24

(a) Number of births per 1,000 of mean population.

6. **Multiple Births.**—Among the total number of 134,927 births registered in Australia in 1924, there were 132,234 single births, 2,658 twins, and 35 triplets. The number of cases of twins was 1,337, there being 16 stillbirths, and there were 12 cases of triplets, one child being stillborn. The total number of mothers was, therefore, 133,583, the proportion of mothers of twins being one in every 100, and of mothers of triplets one in every 11,132 of total mothers. The proportion of multiple births is fairly constant over an extended period.

MULTIPLE BIRTHS.—AUSTRALIA, 1920 TO 1924.

Year.	Cases of Twins.	Cases of Triplets.	Percentage of Cases of Multiple Births on total Mothers.	Number of Mothers to each Multiple Birth.
1920	1,521	16	1.13	88
1921	1,453	12	1.09	92
1922	1,432	12	1.06	94
1923	1,394	6	1.04	96
1924	1,337	12	1.01	99

7. *Ages of Parents.*—(i) *Single Births.* The relative ages of the parents of children registered in 1924 have been tabulated separately for male and female births, twins and triplets being distinguished from single births, and are shown for single ages and for every State in "Australian Demography," No. 42, published by this Bureau. In the present work the exigencies of space allow only the insertion of corresponding tables showing the relative ages of parents in groups of five years. The largest number of fathers in the case of single births is found at ages 30 to 34, and of mothers at ages 25 to 29. When, however, the ages of both parents are considered together, the largest number of single births occurred where both father and mother were between 25 and 29.

AGES OF PARENTS IN CASES OF SINGLE BIRTHS.—AUSTRALIA, 1924.

Ages of Fathers and Sexes of Children.		Total Children.	Ages of Mothers.								
			Under 15.	15 to 19.	20 to 24.	25 to 29.	30 to 34.	35 to 39.	40 to 44.	45 and upwards.	Unspecified.
Under 20	Males..	322	2	237	79	4	..	..	..	..	..
	Females	330	..	243	81	4	..	1	..	1	..
	Total ..	652	2	480	160	8	..	1	..	1	..
20 to 24	Males..	7,129	2	1,531	4,552	919	100	22	3	..	..
	Females	6,730	1	1,425	4,310	872	108	14	..	..	..
	Total ..	13,859	3	2,956	8,862	1,791	208	36	3	..	..
25 to 29	Males..	15,644	1	621	6,235	7,137	1,465	165	20	..	..
	Females	15,096	3	613	5,816	7,113	1,360	171	19	..	1
	Total ..	30,740	4	1,234	12,051	14,250	2,825	336	39	..	1
30 to 34	Males..	16,995	..	222	2,649	6,687	6,326	1,036	71	3	1
	Females	16,181	1	195	2,455	6,396	5,977	1,083	73	..	1
	Total ..	33,176	1	417	5,104	13,083	12,303	2,119	144	3	2
35 to 39	Males..	12,647	..	46	751	2,752	4,769	3,881	436	12	..
	Females	11,979	..	55	696	2,562	4,621	3,660	377	8	..
	Total ..	24,626	..	101	1,447	5,314	9,390	7,541	813	20	..
40 to 44	Males..	6,753	..	20	191	723	1,868	2,658	1,252	40	1
	Females	6,651	..	14	210	692	1,748	2,694	1,252	41	..
	Total ..	13,404	..	34	401	1,415	3,616	5,352	2,504	81	1
45 to 49	Males..	3,081	..	5	72	236	632	1,159	857	120	..
	Females	3,097	..	5	64	247	596	1,138	926	121	..
	Total ..	6,178	..	10	136	483	1,228	2,297	1,783	241	..
50 to 54	Males..	1,189	..	..	23	75	193	392	436	70	..
	Females	1,165	..	2	28	80	183	368	426	78	..
	Total ..	2,354	..	2	51	155	376	760	862	148	..
55 to 59	Males..	366	..	..	11	25	69	111	119	31	..
	Females	371	..	..	8	17	57	139	120	30	..
	Total ..	737	..	..	19	42	126	250	239	61	..
60 to 64	Males..	127	..	..	5	11	25	42	41	3	..
	Females	146	..	..	3	12	21	42	57	11	..
	Total ..	273	..	..	8	23	46	84	98	14	..
65 and upwards	Males..	38	..	1	..	4	8	10	15	..	..
	Females	46	..	..	1	6	9	12	12	6	..
	Total ..	84	..	1	1	10	17	22	27	6	..
Not stated	Males..	..	..	..	..	..	..	..	..	..	..
	Females	1	..	..	1	..	..	..	..	..	..
	Total ..	1	..	..	1	..	..	..	..	..	..
Nuptial children	Males..	64,291	5	2,683	14,568	18,573	15,455	9,476	3,250	279	2
	Females	61,793	5	2,552	13,673	18,001	14,680	9,322	3,262	296	2
	Total ..	126,084	10	5,235	28,241	36,574	30,135	18,798	6,512	575	4
Ex-nuptial children	Males..	3,107	19	816	1,102	547	318	221	69	7	8
	Females	3,043	15	850	1,005	493	353	232	85	6	4
	Total ..	6,150	34	1,666	2,107	1,040	671	453	154	13	12
Total children	Males..	67,398	24	3,499	15,670	19,120	15,773	9,697	3,319	286	10
	Females	64,836	20	3,402	14,678	18,494	15,133	9,534	3,347	322	6
	Total ..	132,234	44	6,901	30,348	37,614	30,806	19,231	6,666	598	16

(ii) *Twins.* The ages of parents of twins in 1924 are given hereunder:—

AGES OF PARENTS OF TWINS.—AUSTRALIA, 1924.

Ages of Fathers and Sexes of Children.			Total Children.	Ages of Mothers.						
				Under 20.	20 to 24.	25 to 29.	30 to 34.	35 to 39.	40 to 44.	45 and upwards.
Under 20 ..	{ Males ..	..	4	2	2	..	..	..	..	..
	{ Females ..	..	2	..	2	..	..	..	..	..
	{ Total ..	..	6	2	4	..	..	..	..	..
20 to 24 ..	{ Males ..	..	90	11	55	24	..	..	..	..
	{ Females ..	..	83	25	42	14	..	2	..	..
	{ Total ..	..	173	36	97	38	..	2	..	..
25 to 29 ..	{ Males ..	..	263	2	98	137	22	4	..	..
	{ Females ..	..	247	6	74	123	40	4	..	..
	{ Total ..	..	510	8	172	260	62	8	..	..
30 to 34 ..	{ Males ..	..	384	1	27	134	193	29	..	..
	{ Females ..	..	351	3	38	136	146	26	2	..
	{ Total ..	..	735	4	65	270	339	55	2	..
35 to 39 ..	{ Males ..	..	298	..	9	56	108	122	3	..
	{ Females ..	..	292	4	9	46	120	104	9	..
	{ Total ..	..	590	4	18	102	228	226	12	..
40 to 44 ..	{ Males ..	..	169	..	8	9	44	78	28	2
	{ Females ..	..	155	..	2	11	30	86	26	..
	{ Total ..	..	324	..	10	20	74	164	54	2
45 to 49 ..	{ Males ..	..	75	..	..	7	30	25	11	2
	{ Females ..	..	72	..	..	11	21	19	21	..
	{ Total ..	..	147	..	..	18	51	44	32	2
50 to 54 ..	{ Males ..	..	34	..	..	..	5	9	19	1
	{ Females ..	..	16	2	..	..	5	5	3	1
	{ Total ..	..	50	2	..	..	10	14	22	2
55 to 59 ..	{ Males ..	..	19	..	..	3	2	4	10	..
	{ Females ..	..	11	..	..	1	2	4	2	2
	{ Total ..	..	30	..	..	4	4	8	12	2
60 and over	{ Males ..	..	5	..	..	..	3	2	..	..
	{ Females ..	..	5	..	..	..	3	2	..	..
	{ Total ..	..	10	..	..	..	6	4	..	..
Nuptial children	{ Males ..	..	1,341	16	199	370	407	273	71	5
	{ Females ..	..	1,234	40	167	342	367	252	63	3
	{ Total ..	..	2,575	56	366	712	774	525	134	8
Ex-nuptial children	{ Males ..	..	47	7	10	17	9	2	2	..
	{ Females ..	..	36	9	7	11	5	4	..	..
	{ Total ..	..	83	16	17	28	14	6	2	..
Total children	{ Males ..	..	1,388	23	209	387	416	275	73	5
	{ Females ..	..	1,270	49	174	353	372	256	63	3
	{ Total ..	..	2,658	72	383	740	788	531	136	8

(iii) *Triplets.* Particulars regarding the ages of parents in cases of triplets are given in the next table:—

AGES OF PARENTS OF TRIPLETS.—AUSTRALIA, 1924.

Ages of Fathers and Sexes of Children.				Total Children.	Ages of Mothers.		
					30 to 34.	35 to 39.	40 to 44.
25 to 29 ..	{ Males ..	..	..	3	..	3	..
	{ Females ..	..	..	3	..	3	..
	{ Total ..	..	..	3	..	3	..
30 to 34 ..	{ Males ..	..	..	9	6	..	3
	{ Females ..	..	..	9	6	..	3
	{ Total ..	..	..	9	6	..	3
35 to 39 ..	{ Males ..	..	..	5	3	2	..
	{ Females ..	..	..	4	3	1	..
	{ Total ..	..	..	9	6	3	..
40 to 44 ..	{ Males ..	..	..	1	..	(a) 2	1
	{ Females ..	..	..	4	..	2	2
	{ Total ..	..	..	5	..	2	3
45 to 49 ..	{ Males ..	..	..	3	..	3	..
	{ Females ..	..	..	3	..	3	..
	{ Total ..	..	..	3	..	3	..
50 to 54 ..	{ Males ..	..	..	2	..	2	..
	{ Females ..	..	..	1	..	1	..
	{ Total ..	..	..	3	..	3	..
55 to 59 ..	{ Males ..	..	..	3	3	..	..
	{ Females ..	..	..	3	3	..	..
	{ Total ..	..	..	3	3	..	..
Total children	{ Males ..	..	..	14	6	7	1
	{ Females ..	..	..	21	9	7	5
	{ Total ..	..	..	35	15	14	6

(a) Excluding 1 female triplet stillborn.

(iv) *Influence on Masculinity.* Valid deductions cannot, of course, be drawn from one year's figures as to variations in the masculinity of the births at different ages of the parents, but so far as the figures go the following conclusions are indicated:—In cases where the father is older than the mother the masculinity has a tendency to be above the average, while in cases where both parents belong to the same age group, or where the father is younger than the mother, the masculinity is rather below the average. It is also below the average in cases where the father, or both father and mother are under 25; and it is above the average where the mother alone is under 25.

8. *Birthplaces of Parents.*—The relative birthplaces of the parents of children whose births were registered during the year 1924 will be found tabulated in the Bulletin of "Australian Demography," published by this Bureau. A summary of the results of the tabulation is given hereunder.

BIRTHPLACES OF PARENTS.—AUSTRALIA, 1924.

Birthplaces,	Fathers.			Mothers of Nuptial Children.			Mothers of Ex-nuptial Children.	
	Single Births.	Twins.	Triplets.	Single Births.	Twins.	Triplets.	Single Births.	Twins.
AUSTRALASIA—								
New South Wales ..	41,294	399	6	42,917	404	4	2,334	11
Victoria ..	32,629	343	2	32,360	352	3	1,463	11
Queensland ..	13,417	135	1	15,146	150	..	901	12
South Australia ..	11,169	112	2	10,689	110	2	353	1
Western Australia ..	2,681	27	..	3,527	31	..	259	2
Tasmania ..	5,642	63	1	5,519	67	1	323	2
Northern Territory ..	25	..	..	43	..	..	15	..
Federal Capital Territory ..	3	..	..	5	..	..	..	..
Papua ..	2	..	..	1	..	..	1	..
Territory of New Guinea ..	2	..	..	1	..	..	..	..
New Zealand ..	1,009	12	..	710	7	..	45	..

BIRTHPLACES OF PARENTS.—AUSTRALIA, 1924—*continued.*

Birthplaces.	Fathers.			Mothers of Nuptial Children.			Mothers of Ex-nuptial Children.	
	Single Births.	Twins.	Trip-lets.	Single Births.	Twins.	Trip-lets.	Single Births.	Twins.
EUROPE—								
England	11,112	130	..	10,031	113	1	282	3
Wales	294	5	..	221	2	..	9	..
Scotland	2,555	26	..	2,416	29	..	79	..
Ireland	1,249	12	..	826	13	..	20	..
Other British Possessions								
in Europe	113	5	..	91	3	..	..	..
Denmark	134	1	..	30	..	..	2	..
France	58	2	..	53	1	..	4	..
Germany	355	2	..	126	2	..	3	..
Greece	258	2	..	174	2	..	1	..
Italy	462	1	..	328	1	..	4	..
Netherlands	55	..	..	23	1	..	..	..
Norway	79	1	..	14	..	..	1	..
Poland	39	..	..	14	..	..	..	..
Russia	146	4	..	74	2	..	2	..
Sweden	104	..	..	4	..	..	..	..
Switzerland	43	..	..	28	..	..	2	..
Other European Countries	196	2	..	113	..	..	2	..
ASIA—								
British India and Ceylon	154	1	..	78	1	..	2	..
Other British Possessions								
in Asia	20	..	..	8	..	..	..	..
China	112	1	..	23	..	..	2	..
Japan	20	..	..	16	..	..	..	..
Syria	75	1	..	57	..	..	..	..
Other Countries in Asia	15	..	..	11	..	..	1	..
AFRICA—								
Union of S. Africa ..	115	1	..	149	3	1	11	..
Other African Countries	25	..	..	22	..	..	1	..
AMERICA—								
Canada	88	2	..	36	..	..	2	..
Other British Possessions								
in America	6	..	..	3	..	..	..	..
United States of America	183	1	..	91	..	..	6	..
Other American Countries	31	1	..	24	..	..	2	..
POLYNESIA—								
Fiji	31	1	..	23	..	..	..	..
Other British Posses-								
sions in Polynesia ..	4	..	..	1	..	..	..	..
New Caledonia	12	..	..	21	..	..	3	..
New Hebrides	2	..	..	2	..	..	..	..
Other Polynesian Islands	11	..	..	3	..	..	..	..
At Sea	49	2	..	26	1	..	1	..
Unspecified	6	..	..	6	..	..	14	..
Total	126,084	1,295	12	126,084	1,295	12	6,150	42

9. Occupations of Fathers.—(i) Year 1924. A summary of the occupations of the fathers of all nuptial children whose births were registered in 1924 is given in the following table :—

OCCUPATIONS OF FATHERS OF NUPTIAL CHILDREN.—AUSTRALIA, 1924.

Occupations.	Number of Fathers.	Occupations.	Number of Fathers.
CLASS I.—PROFESSIONAL.		CLASS III.—COMMERCIAL—cont.	
General Government	784	Carriages and Vehicles	57
Local Government	80	Harness, Saddlery & Leatherware ..	3
Defence	349	Ships and Boats	4
Law and Order	1,156	Building Materials	8
Religion	331	Furniture	35
Charities	3	Chemicals and By-products	9
Health	1,117	Paper and Stationery	47
Literature	138	Textile Fabrics	405
Science	43	Dress	158
Civil Engineering, Architecture, and Surveying	426	Fibrous Materials	10
Education	788	Animal Food	2,514
Fine Arts	89	Vegetable Food	909
Music	140	Groceries, Drinks, Narcotics, and Stimulants	1,274
Amusements	502	Living Animals	96
Total Professional	5,946	Leather, Raw Materials	34
CLASS II.—DOMESTIC.		Wool and Tallow	79
Hotelkeepers and Assistants	780	Hay, Corn, etc.	123
Others engaged in providing board and lodging	344	Other Vegetable Matter n.e.i. ..	84
House Servants	3	Wood and Coal	168
Coachmen and Grooms	52	Stone, Clay and Glass	18
Hairdressers	525	Gold, Silver and Precious Stones ..	6
Laundrymen	29	Ironmongery	168
Others engaged in domestic occupations	365	Merchants, Importers	669
Total Domestic	2,098	Shopkeepers and Assistants	1,361
CLASS III.—COMMERCIAL.		Dealers and Hawkers	255
Banking and Finance	736	Agents and Brokers	514
Insurance and Valuation	588	Clerks, Bookkeepers, etc.	4,321
Landed and House Property	237	Commercial Travellers, Salesmen ..	1,991
Property Rights n.e.i.	3	Others engaged in Commercial Pursuits	1,335
Books, Publications, Advertising ..	212	Speculators on Chance Events ..	43
Musical Instruments	13	Storage	5
Prints, Pictures and Art Materials ..	2	Total Commercial	18,519
Ornaments and Small Wares	3	CLASS IV.—TRANSPORT AND COMMUNICATION.	
Sports and Games	1	Railway Traffic	4,912
Designs, Medals and Type	1	Tramway Traffic	1,231
Watches, Clocks, Jewellery	6	Road Traffic	6,266
Machinery	14	Sea and River Traffic	1,482
		Postal Service	710
		Telegraph and Telephone Service ..	1,025
		Messengers, etc.	29
		Aviation	15
		Total Transport & Communication ..	15,670

OCCUPATIONS OF FATHERS OF NUPTIAL CHILDREN.—AUSTRALIA, 1924
—continued.

Occupations.	Number of Fathers.	Occupations.	Number of Fathers.
CLASS V.—INDUSTRIAL.		CLASS V.—INDUSTRIAL—cont.	
Books and Publications ..	858	Roads, Railways, Earthworks ..	278
Musical Instruments ..	70	Disposal of the Dead ..	39
Prints, Pictures and Art Materials ..	63	Disposal of Refuse ..	146
Ornaments and Small Wares ..	129	Other Industrial Workers—	
Equipment for Sports and Games ..	7	Manufacturers, etc. ..	791
Medals, Type, and Dies ..	22	Engineers, Firemen ..	3,088
Watches, Clocks, and Scientific Instruments ..	102	Contractors ..	1,259
Surgical Instruments ..	15	Labourers, undefined ..	23,744
Arms and Ammunition ..	3	Others ..	337
Engines, Machines, Tools, and Implements ..	1,671	Total Industrial ..	53,899
Carriages and Vehicles ..	1,603		
Harness, Saddlery & Leatherware ..	346		
Ships, Boats, etc. ..	140		
Furniture ..	799		
Building Materials ..	1,106		
Chemicals and By-products ..	47	CLASS VI.—AGRICULTURAL, PASTORAL, MINING, ETC.	
Textile Fabrics ..	281	Agricultural ..	22,045
Dress ..	1,853	Pastoral ..	3,534
Fibrous Materials ..	35	Dairy Farming ..	932
Animal Food ..	332	Bees, Fisheries, and Wild Animals ..	426
Vegetable Food ..	1,525	Forestry ..	747
Groceries, Drinks, Narcotics, and Stimulants ..	302	Water Conservation and Supply ..	103
Animal Matter n.e.i. ..	286	Mines and Quarries ..	3,259
Workers in Wood n.e.i. ..	189	Total Primary Producers ..	31,046
Vegetable Produce for Fodder ..	8		
Paper ..	25		
Stone, Clay, Glass, etc. ..	559		
Jewellery and Precious Stones ..	224		
Metals, other than Gold & Silver ..	2,804		
Gas, Electric Lighting, etc. ..	1,207		
Building—		CLASS VII.—INDEFINITE.	
Builders ..	792	Independent Means, having no specified occupation ..	173
Stonemasons ..	151	Occupation not stated ..	40
Bricklayers ..	685	Total Indefinite ..	213
Slaters ..	84		
Carpenters ..	3,294	Total all Occupations ..	127,391
Plasterers ..	509		
Painters ..	1,175		
Plumbers ..	836		
Signwriters ..	68		
Others ..	12		

(ii) *Summary, 1920 to 1924.* The next table gives a summary in classes of the occupations of fathers of nuptial children in each of the last five years, with the percentage of each class on the total number of fathers. In 1924, 42.31 per cent. of fathers were of the industrial class, and 24.37 per cent. were of the agricultural, pastoral, mining, etc., class.

OCCUPATIONS OF FATHERS OF NUPTIAL CHILDREN.—AUSTRALIA, 1920 TO 1924.

Class.		1920.	1921.	1922.	1923.	1924.
I. Professional	No.	6,638	6,204	6,369	6,010	5,946
	%	5.17	4.83	4.90	4.71	4.67
II. Domestic	No.	2,165	2,319	2,045	2,242	2,098
	%	1.69	1.81	1.57	1.76	1.64
III. Commercial	No.	18,208	18,298	18,731	18,210	18,519
	%	14.19	14.26	14.41	14.27	14.54
IV. Transport and Communication	No.	15,285	15,351	15,809	15,244	15,670
	%	11.91	11.96	12.17	11.95	12.30
V. Industrial	No.	54,086	53,567	54,104	53,737	53,899
	%	42.15	41.75	41.64	42.11	42.31
VI. Agricultural, pastoral, mining, etc.	No.	31,744	32,405	32,665	31,974	31,046
	%	24.74	25.25	25.14	25.06	24.37
VII. Indefinite	No.	147	169	204	186	213
	%	0.11	0.13	0.16	0.14	0.17
VIII. Dependents	No.	55	13	7	..	..
	%	0.04	0.01	0.01	..	..
Total	No.	128,328	128,326	129,934	127,603	127,391
	%	100.00	100.00	100.00	100.00	100.00

10. Mother's Age, Duration of Marriage, and Issue.—(i) *General*. A tabulation has been made showing, in age-groups, the duration of marriage and issue of mothers. The total number of nuptial confinements in 1924 was 127,391, but in 25 cases the necessary information was lacking, and the following series of tables refers, therefore, to 127,366 nuptial confinements, viz., 126,059 single births, 1,295 cases of twins, and 12 cases of triplets. Ex-nuptial children—previous issue by the same father—are included as previous issue, but children by former marriages, and stillborn children are excluded. The tables cannot be given *in extenso*, but the following are their most salient features. The complete tabulations are shown in "Australian Demography," No. 42.

(ii) *Duration of Marriage and Issue of Mothers*. The following table shows that the duration of marriage of mothers of nuptial children ranged from less than one year up to between 31 and 32 years, and that the average family increased fairly regularly with the duration of marriage. The average number of children of all marriages was 3.08, the corresponding figures for 1923 being 3.08; for 1922, 3.10; for 1921, 3.08; and for 1920, 3.11.

DURATION OF MARRIAGE AND ISSUE OF MOTHERS.—AUSTRALIA, 1924.

Duration of Marriage.	Total Mothers.	Total Issue.	Average Number of Children.	Duration of Marriage.	Total Mothers.	Total Issue.	Average Number of Children.
Years.				Years.			
0-1	19,241	19,485	1.01	17-18	1,647	11,681	7.09
1-2	12,910	15,763	1.22	18-19	1,360	10,259	7.54
2-3	12,297	22,258	1.81	19-20	1,073	8,481	7.90
3-4	12,054	25,577	2.12	20-21	833	6,854	8.23
4-5	10,922	27,313	2.50	21-22	607	5,199	8.57
5-6	8,269	23,578	2.85	22-23	487	4,371	8.98
6-7	6,199	19,675	3.17	23-24	366	3,369	9.20
7-8	5,506	19,159	3.48	24-25	250	2,451	9.80
8-9	5,434	20,543	3.78	25-26	133	1,295	9.74
9-10	5,107	21,242	4.16	26-27	72	747	10.38
10-11	4,866	22,028	4.53	27-28	45	462	10.27
11-12	4,023	19,631	4.88	28-29	21	238	11.33
12-13	3,643	19,021	5.22	29-30	13	148	11.38
13-14	3,139	17,520	5.58	30-31	4	40	10.00
14-15	2,706	16,158	5.97	31-32	1	16	16.00
15-16	2,228	14,254	6.40				
16-17	1,910	12,984	6.80	Total	127,366	391,800	3.08

(iii) *Ages of Mothers and Issue.* The ages of mothers, issue, and average family are given in the attached table, which shows that the average family increased fairly regularly to a maximum of 7.69 children in the age-group 45 years and over, and that the greatest number of mothers occurs in the group 25 to 29 years.

AGES AND ISSUE OF MOTHERS.—AUSTRALIA, 1924.

Ages of Mothers.	Total Mothers.	Total Issue.	Average Number of Children.	Ages of Mothers.	Total Mothers.	Total Issue.	Average Number of Children.
Under 20 years	5,273	6,274	1.19	40-44 years ..	6,581	41,528	6.31
20-24 years ..	23,424	49,277	1.73	45 yrs. and over	578	4,443	7.69
25-29 ..	36,923	90,974	2.46				
30-34 ..	30,526	106,992	3.50				
35-39 ..	19,061	92,312	4.84	All ages ..	127,306	391,806	3.08

(iv) *Previous Issue of Mothers, Various Ages.* The previous issue, according to the age of the mother, is given in the following table. One mother aged between 40 and 44 years had 19 children prior to her latest confinement :—

PREVIOUS ISSUE OF MOTHERS OF VARIOUS AGES.—AUSTRALIA, 1924.

Previous Issue.	Mothers' Ages.							
	Under 20 Years.	20-24 Years.	25-29 Years.	30-34 Years.	35-39 Years.	40-44 Years.	45 Years and Over.	Total.
0	4,388	14,401	10,946	4,888	1,804	386	27	36,840
1	801	8,933	10,836	6,555	2,324	459	20	29,928
2	80	3,799	7,637	5,962	2,676	546	22	20,722
3	4	1,063	4,205	4,543	2,654	698	39	13,206
4	..	192	2,057	3,483	2,490	713	46	8,981
5	..	32	844	2,457	2,071	757	59	6,220
6	..	4	295	1,445	1,835	694	64	4,337
7	..	..	76	739	1,310	664	58	2,847
8	..	..	19	286	960	544	66	1,875
9	..	..	8	108	500	454	50	1,120
10	..	..	..	34	248	293	57	632
11	..	..	..	15	122	189	27	353
12	..	..	..	6	39	105	18	168
13	..	..	..	5	20	54	12	91
14	..	..	..	..	4	12	6	22
15	..	..	..	..	3	8	3	14
16	..	..	..	..	1	2	3	6
17	..	..	..	..	..	2	1	3
19	..	..	..	..	..	1	..	1
Total Mothers	5,273	28,424	36,923	30,526	19,061	6,581	578	127,366

(v) *Previous Issue of Mothers of Twins and Triplets.* Figures regarding the previous issue of mothers of twins and triplets show that 316 mothers had twins at their first confinement; 262 at their second; 241 at their third; 134 at their fourth; 112 at their

fifth; 76 at their sixth; 52 at their seventh; 48 at their eighth; 27 at their ninth; 9 at their tenth; 11 at their eleventh; 4 at their twelfth; 2 at their thirteenth; and 1 at her fourteenth.

Of the 12 cases of triplets registered during 1924, 3 were first confinements, 1 second, 4 fourth, 2 fifth, 1 sixth, and 1 fourteenth.

11. *Interval between Marriage and First Birth.*—(i) *Interval and Sex of Children.* The following table shows the interval between marriage and first birth, distinguishing the sexes of the children. Twins and triplets are included, the eldest born only being enumerated :—

INTERVAL BETWEEN MARRIAGE AND FIRST BIRTH.—AUSTRALIA, 1924.

Interval.	Number of First Children.			Interval.	Number of First Children.		
	Males.	Females.	Total.		Males.	Females.	Total.
Under 1 month	169	174	343	2 years ..	1,653	1,501	3,154
1 month ..	244	222	466	3 " ..	903	874	1,777
2 months ..	334	303	637	4 " ..	464	496	960
3 " ..	464	457	921	5 " ..	239	226	465
4 " ..	602	550	1,152	6 " ..	145	135	280
5 " ..	874	849	1,723	7 " ..	98	124	222
6 " ..	1,099	1,069	2,168	8 " ..	82	75	157
7 " ..	1,130	1,016	2,146	9 " ..	59	56	115
8 " ..	743	662	1,405	10 " ..	43	40	83
9 " ..	1,557	1,463	3,020	11 " ..	34	36	70
10 " ..	1,621	1,496	3,117	12 " ..	30	27	57
11 " ..	1,060	1,027	2,087	13 " ..	16	19	35
12 " ..	1,072	995	2,067	14 " ..	9	7	16
13 " ..	619	656	1,275	15 " ..	5	6	11
14 " ..	567	513	1,080	16 " ..	9	5	14
15 " ..	489	484	973	17 " ..	4	8	12
16 " ..	425	455	880	18 " ..	2	2	4
17 " ..	395	347	742	19 " ..	2	2	4
18 " ..	337	356	693	20 " ..	3	6	9
19 " ..	295	323	618	21 " ..	1	1	2
20 " ..	312	258	570	23 " ..	..	1	1
21 " ..	237	238	475	27 " ..	..	1	1
22 " ..	215	222	437				
23 " ..	193	203	396	Total ..	18,854	17,986	36,840

The masculinity of first births was 2.36 as compared with 1.98 for total births.

(ii) *Ages of Mothers and Interval.* The previous issue of mothers of ex-nuptial children is not recorded, but for the purposes of the following table all ex-nuptial births have been assumed to be first births. The table shows the ages of mothers in the cases of ex-nuptial first births, of nuptial first births occurring less than nine months after marriage, and of nuptial first births occurring nine months or more after marriage. A comparison of the combined total of the first two columns with the total of nuptial children born nine months or more after marriage shows that for all ages the ratio was about 2 to 3. At all ages up to and including 21, however, there was a great preponderance of ex-nuptial births and of births following on ante-nuptial conception. It must, of course, be understood that a certain number of premature births is necessarily included among the births which occurred less than nine months after marriage, but information in connexion therewith is not available.

**AGES OF MOTHERS AND INTERVAL BETWEEN MARRIAGE AND FIRST
BIRTH, ETC.—AUSTRALIA, 1924.**

Age of Mother at Birth of Child.	Ex-nuptial Births.	Nuptial Births less than nine months after Marriage.	Total of two preceding columns.	Nuptial First Births nine months after Marriage and later.	Total Nuptial First Births.	Nuptial First Births and Ex-nuptial Births.
12 years ..	1	..	1	1	1	2
13 " ..	4	1	5	..	1	5
14 " ..	29	5	34	2	7	36
15 " ..	62	25	87	2	27	89
16 " ..	166	191	357	27	218	384
17 " ..	352	571	923	115	686	1,038
18 " ..	484	1,031	1,515	335	1,366	1,850
19 " ..	610	1,335	1,945	747	2,082	2,692
20 " ..	530	1,350	1,880	976	2,326	2,856
21 " ..	450	1,282	1,732	1,522	2,804	3,254
22 " ..	458	1,044	1,502	1,979	3,023	3,481
23 " ..	359	892	1,251	2,315	3,207	3,566
24 " ..	319	727	1,046	2,314	3,041	3,360
25 " ..	241	534	775	2,152	2,686	2,927
26 " ..	221	397	618	2,128	2,525	2,746
27 " ..	202	301	503	1,853	2,154	2,356
28 " ..	222	242	464	1,702	1,944	2,166
29 " ..	168	192	360	1,445	1,637	1,805
30 " ..	168	152	320	1,239	1,391	1,559
31 " ..	139	135	274	970	1,105	1,244
32 " ..	145	95	240	869	964	1,109
33 " ..	103	89	192	663	752	855
34 " ..	123	80	203	596	676	799
35 " ..	131	78	209	450	528	659
36 " ..	94	53	147	403	456	550
37 " ..	91	38	129	283	321	412
38 " ..	74	42	116	247	289	363
39 " ..	66	27	93	183	210	276
40 " ..	61	17	78	111	128	189
41 " ..	36	10	46	84	94	130
42 " ..	30	8	38	69	77	107
43 " ..	20	7	27	52	59	79
44 " ..	8	4	12	24	28	36
45 " ..	7	5	12	11	16	23
46 " ..	3	..	3	7	7	10
47 " ..	3	1	4	3	4	7
Unspecified ..	12	..	12	..	..	12
Total ..	6,192	10,961	17,153	25,879	36,840	43,032

12. Interval between Birth and Registration of Birth.—Information was obtained for the years 1911 to 1921 regarding the period which elapsed between birth and registration. A detailed table giving the results for 1921 is contained in Demography Bulletin No. 39, issued by this Bureau. The law relating to maternity allowances has tended to accelerate the registration of births; and during the year under review it was found that approximately 35 per cent. were registered in the first week.

Since the granting of the maternity allowance the weighted average interval between the dates of birth and registration has been found to be about 13 days both for nuptial and ex-nuptial children.

§ 2. Marriages.

1. Marriages, 1920 to 1924.—The number of marriages registered in Australia during 1924 was 45,869, giving a rate of 7.90 per 1,000 of the mean population for the year. The number of marriages in each State for the years 1920 to 1924 is given hereunder:—

MARRIAGES, 1920 TO 1924.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	North. Terr.	Fed. Cap. Terr.	Australia.
1920 ..	20,154	14,898	6,667	4,881	2,932	1,999	17	4	51,552
1921 ..	18,506	13,676	5,963	4,383	2,656	1,668	15	2	46,869
1922 ..	17,580	12,996	5,878	4,144	2,446	1,674	13	..	44,731
1923 ..	17,523	13,126	5,814	4,099	2,376	1,592	7	4	44,541
1924 ..	18,072	13,296	6,234	4,121	2,596	1,529	17	4	45,869

2. Marriage Rates, 1920 to 1924.—The number of marriages registered per thousand of mean population is given in the following table for the same period:—

CRUDE MARRIAGE RATES(a), 1920 TO 1924.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	North. Terr.	Fed. Cap. Terr.	Australia.
1920 ..	9.75	9.85	8.94	10.03	8.88	9.50	4.04	1.84	9.62
1921 ..	8.78	8.90	7.82	8.82	7.96	7.82	3.84	0.81	8.59
1922 ..	8.18	8.27	7.52	8.19	7.20	7.79	3.56	..	8.03
1923 ..	8.00	8.16	7.24	7.29	6.82	7.39	1.94	1.21	7.83
1924 ..	8.11	8.10	7.55	7.78	7.22	7.12	4.72	1.04	7.90

(a) Number of marriages (not persons married) per 1,000 of mean annual population.

As in some international tabulations the marriage rates are calculated per 1,000 of the unmarried population of 15 years and over, the corresponding rates have been worked out for Australia for the last four Census periods for which the particulars are available. The figures comprise in each case the Census year with the year immediately preceding and the year immediately following, and are as follows:—Years 1880–82, 48.98; years 1890–92, 45.74; years 1900–02, 42.14; years 1910–12, 50.44; years 1920–22, 56.02. These rates refer, of course, to persons married and not to marriages, as is the case in the preceding table.

3. Marriage Rates in Various Countries.—The following table shows the marriage rate for Australia in comparison with various other countries:—

CRUDE MARRIAGE RATES.—VARIOUS COUNTRIES.

Country.	Year.	Crude Marriage Rate.	Country.	Year.	Crude Marriage Rate.
Russia (European) ..	1923	12.8	England and Wales..	1924	7.7
Belgium ..	1923	10.5	Queensland ..	1924	7.6
United States ..	1922	10.3	Great Britain ..	1924	7.5
Rumania ..	1922	10.1	Spain ..	1924	7.3
Prussia ..	1923	9.4	Finland ..	1923	7.3
Czecho-Slovakia ..	1923	9.3	Western Australia ..	1924	7.2
Hungary ..	1924	9.0	Germany ..	1924	7.1
France ..	1924	9.0	Tasmania ..	1924	7.1
Netherlands ..	1924	9.0	Canada (excluding Quebec) ..	1924	7.0
Japan ..	1923	8.8	Chile ..	1923	6.7
Austria ..	1923	8.6	Scotland ..	1924	6.6
Italy ..	1923	8.4	Quebec (Canada) ..	1922	6.5
Victoria ..	1924	8.1	Sweden ..	1924	6.2
New South Wales ..	1924	8.1	Norway ..	1924	6.0
Denmark ..	1924	8.0	Northern Ireland ..	1924	5.8
New Zealand ..	1924	7.9	Ceylon ..	1923	5.4
South African Union ..	1924	7.9	Uruguay ..	1923	5.3
Australia ..	1924	7.9	Irish Free State ..	1923	4.9
Ontario (Canada) ..	1924	7.9	Jamaica ..	1923	3.8
South Australia ..	1924	7.8			
Switzerland ..	1923	7.7			

4. Age and Conjugal Condition at Marriage.—(i) *General.* The ages at marriage of bridegrooms and brides will be found in "Australian Demography," Bulletin No. 42. A summary in age groups is given in the table hereunder, which also shows the previous conjugal condition of the contracting parties. There were 2,227 males who were less than twenty-one years of age married during 1924, while the corresponding number of females was 9,714. At the other extreme there were 49 men of sixty-five years and upwards, who described themselves as bachelors, and 14 spinsters of corresponding age.

AGES AND CONJUGAL CONDITION OF PERSONS MARRIED.—AUSTRALIA, 1924.

Age at Marriage.	Bridegrooms.				Brides.			
	Bachelors.	Widowers.	Divorced.	Total.	Spinsters.	Widows.	Divorced.	Total.
Under 20..	1,098	..	..	1,098	6,783	3	2	6,788
20-24 years	14,281	19	5	14,305	19,065	71	44	19,180
25-29 "	14,422	164	54	14,640	10,448	273	151	10,872
30-34 "	7,095	368	150	7,613	3,833	479	214	4,526
35-39 "	3,118	498	192	3,808	1,592	462	182	2,236
40-44 "	1,200	459	117	1,776	541	389	97	1,027
45-49 "	595	380	80	1,055	289	270	34	593
50-54 "	280	321	45	646	114	177	20	311
55-59 "	124	264	20	408	42	110	4	156
60-64 "	60	183	8	251	25	62	4	91
65 years and over ..	49	215	4	268	14	73	1	88
Unspecified	1	..	..	1	1	..	..	1
Total	42,323	2,871	675	45,869	42,747	2,369	753	45,869

(ii) *Relative Ages, Bridegrooms and Brides.* The relative ages of bridegrooms and brides are shown for single years in "Australian Demography," Bulletin No. 42; a condensation into age-groups of five years is given below:—

RELATIVE AGES OF PERSONS MARRIED.—AUSTRALIA, 1924.

Ages.		Total Bride- grooms.	Ages of Brides.								Not stated.
			Under 15.	15 to 19.	20 to 24.	25 to 29.	30 to 34.	35 to 39.	40 to 44.	45 and upwards.	
Ages of Bridegrooms.	Under 20	1,098	7	789	289	10	3	..	..	..	..
	20 to 24	14,305	4	3,946	8,506	1,571	216	46	13	3	..
	25 to 29	14,640	3	1,473	7,046	4,890	986	204	27	11	..
	30 to 34	7,613	..	403	2,347	2,738	1,558	436	108	23	..
	35 to 39	3,808	..	113	709	1,093	972	665	190	66	..
	40 to 44	1,776	..	32	197	369	434	392	241	111	..
	45 to 49	1,055	1	11	50	113	222	279	188	191	..
	50 to 54	646	..	4	23	54	87	120	124	234	..
	55 to 59	408	..	1	11	24	25	59	75	213	..
	60 to 64	251	..	1	1	5	14	22	37	171	..
	65 and upwards	268	..	..	1	5	9	13	24	216	..
Not stated		1	..	..	..	..	..	..	..	..	1
Total Brides		45,869	15	6,773	19,180	10,872	4,526	2,236	1,027	1,239	1

(iii) *Average Ages, Bridegrooms and Brides.* The age at marriage of brides has remained fairly stationary during recent years at an average of about 26 years. The figures for the five years are:—1920, 26.11 years; 1921, 26.16 years; 1922, 26.14 years; 1923, 25.61 years; and 1924, 25.46 years. For the five years 1907–11 the average age was 25.70 years, compared with 25.92 years for the five years 1912–16, 26.07 years for the five years 1917–21, and 25.90 years for the five years 1920–1924. The average age of bridegrooms in 1920 was 29.55 years; in 1921, 29.74 years; in 1922, 29.65 years; in 1923, 29.12 years; and in 1924, 28.99 years. It follows, therefore, that brides are generally speaking rather less than three and one-half years younger than bridegrooms.

5. *Previous Conjugal Condition.*—The number of bachelors and spinsters, widowed and divorced persons, who were married during the year 1924 has already been given. The following table shows the conjugal condition of the contracting parties:—

PREVIOUS CONJUGAL CONDITION OF PERSONS MARRIED.—AUSTRALIA, 1924.

Conjugal Condition.		Total Bridegrooms.	Brides.		
			Spinsters.	Widows.	Divorced.
Bridegrooms	Bachelors ..	42,323	40,357	1,424	542
	Widowers ..	2,871	1,907	839	125
	Divorced ..	675	483	106	86
Total Brides		45,869	42,747	2,369	753

6. *Birthplaces of Persons Married.*—The following table shows the birthplaces of persons who were married in 1924. In "Australian Demography," Bulletin No. 42, the relative birthplaces of bridegrooms and brides will be found tabulated in full detail.

BIRTHPLACES OF PERSONS MARRIED.—AUSTRALIA, 1924.

Birthplaces.	Bridegrooms.	Brides.	Birthplaces.	Bridegrooms.	Brides.
AUSTRALASIA—			ASIA—		
New South Wales ..	14,591	15,570	British India and Ceylon ..	44	20
Victoria ..	12,091	12,365	Other British Possessions in Asia ..	6	3
Queensland ..	5,002	5,398	China ..	20	4
South Australia ..	3,902	3,957	Syria ..	18	18
Western Australia ..	1,348	1,708	Other Countries in Asia ..	20	10
Tasmania ..	1,822	1,892		108	55
Northern Territory ..	16	18	AFRICA—		
Territory of New Guinea ..	1	2	Union of South Africa	59	56
New Zealand ..	363	316	Other British Possessions in Africa	4	..
	39,136	41,226	Other African Countries ..	7	6
EUROPE—				70	62
England ..	3,993	2,999	AMERICA—		
Wales ..	133	74	Canada ..	36	13
Scotland ..	1,031	798	Other British Possessions in America	1	..
Ireland ..	456	253	United States ..	84	30
Other British Possessions in Europe ..	37	15	Other American Countries ..	12	15
Belgium ..	4	3		133	58
Denmark ..	53	7	POLYNESIA—		
Finland ..	12	1	Fiji ..	17	4
France ..	24	17	Other British Possessions in Polynesia ..	3	..
Germany ..	121	47	Other Polynesian Islands ..	15	11
Greece ..	83	51		35	15
Italy ..	147	90	At Sea ..	12	9
Netherlands ..	26	4	Unspecified ..	17	22
Norway ..	33	8			
Poland ..	12	5			
Russia ..	60	14			
Spain ..	11	6			
Sweden ..	56	3			
Switzerland ..	23	7			
Other Countries in Europe ..	43	20			
	6,358	4,422			
			Total ..	45,869	45,869

7. Occupations and Ages of Bridegrooms.—A tabulation has been made of the occupations and ages of all males married in Australia, and the results for 1924 are published in detail in "Australian Demography," Bulletin No. 42. An abridgment of this tabulation is given below. The average ages of the persons falling under the twenty-eight subdivisions were determined, and it appears that, apart from the Indefinite class, which consists chiefly of persons who have retired from business and who are living on income from investments, and who may be expected to have reached a comparatively high age before attaining a position of financial independence, the average age ranges from 26.95 years for those engaged in the preparation of animal and vegetable foodstuffs to 31.91 years in the class engaged in pastoral pursuits. On the experience of 1924 the average age at marriage of bridegrooms in the larger classes of occupations was as follows:—Professional, 29.6 years; Domestic, 30.6 years; Commercial, 29.2 years; Transport, 28.1 years; Industrial, 28.3 years; and Primary Producers, 30.4 years.

OCCUPATIONS AND AGES OF BRIDEGROOMS.—AUSTRALIA, 1924.

Ages at Marriage.	Pro-fessional.		Domestic.		Commercial.							Transport and Communication.			
	Government, Defence, and Law.	Others.	Board and Lodging.	Others.	Property and Finance.	Art. Mechanic, and Textile Products.	Food and Drinks.	Animal and Vegetable Substances.	Fuel, Light, and Metals.	Merchants and Dealers.	Others.	Railways.	Roads and Trams.	Sea and Rivers.	Others.
15 years ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
16 " ..	..	1	..	..	..	..	1	..	..	..	1	..	1	..	..
17 " ..	..	1	..	..	..	1	7	..	..	..	4	..	..	..	..
18 " ..	1	6	4	..	..	3	17	..	..	6	10	3	21	..	2
19 " ..	8	17	4	15	3	3	36	..	..	7	41	16	63	5	9
20 " ..	14	20	7	15	5	4	53	..	..	4	64	28	84	10	12
21 " ..	36	61	22	25	13	24	89	5	5	44	194	75	237	32	24
22 " ..	52	98	20	26	25	16	129	5	6	65	257	94	197	50	42
23 " ..	85	138	36	34	52	25	113	6	7	66	343	95	241	51	47
24 " ..	102	173	25	24	66	30	148	16	7	71	377	153	264	55	60
25 " ..	91	165	22	30	67	37	116	16	5	77	387	117	184	46	66
26 " ..	82	162	37	24	55	40	103	10	8	64	407	117	192	51	56
27 " ..	82	125	28	23	63	28	87	13	9	66	312	89	161	29	43
28 " ..	66	129	27	23	47	37	80	9	3	63	303	76	131	43	53
29 " ..	64	111	18	18	33	16	70	7	5	61	264	58	122	38	41
30 " ..	52	95	16	9	31	23	77	10	3	48	229	58	90	22	45
31 " ..	43	74	14	7	27	15	49	5	4	48	172	45	82	27	27
32 " ..	34	51	13	7	26	17	40	9	4	47	149	42	69	27	25
33 " ..	27	57	19	12	21	14	40	4	6	37	100	33	54	20	19
34 " ..	27	59	23	9	19	11	37	3	1	23	118	32	54	16	19
35 to 39 ..	76	175	62	32	50	54	109	16	16	121	320	97	157	84	43
40 " 44 ..	20	75	37	24	27	21	51	9	6	52	159	49	62	41	17
45 " 49 ..	22	51	13	15	13	5	30	4	3	54	87	23	34	22	12
50 and over	47	72	27	22	39	13	44	10	5	60	110	36	47	32	5
Not stated	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total ..	1,032	1,916	474	398	682	437	1,526	161	109	1,100	4,408	1,337	2,554	703	667
Average age— year 1924	29.30	29.72	31.41	29.74	30.21	29.65	28.18	30.94	30.55	31.06	28.79	28.45	27.19	30.44	28.09

Ages at Marriage.	Manufacturing.								Primary Producers.				Indefinite.
	Art and Mechanic Productions.	Textiles and Fibrous Materials.	Food and Drinks.	Animal and Vegetable Substances.	Metals and Minerals.	Fuel, Light, and Energy.	Building and Construction.	Others.	Agri-cultural.	Pastoral.	Mining and Quarrying.	Others.	
15 years ..	..	..	..	..	1	..	..	..	..	..	..	1	..
16 " ..	1	..	..	..	4	..	..	..	..	..	..	..	..
17 " ..	6	3	2	..	..	..	..	..	..	..	..	..	..
18 " ..	23	12	11	4	18	2	22	88	12	9	4	..	..
19 " ..	63	18	17	10	30	10	59	202	48	7	19	6	..
20 " ..	91	22	34	6	59	19	74	341	90	8	37	9	..
21 " ..	223	52	55	15	95	25	190	696	183	38	66	31	2
22 " ..	256	65	77	19	115	37	218	732	257	55	74	26	..
23 " ..	303	81	61	21	122	64	227	838	347	67	72	39	..
24 " ..	334	84	56	22	123	60	260	870	424	101	83	36	1
25 " ..	266	63	47	20	111	60	251	653	434	85	71	31	..
26 " ..	211	50	45	15	87	44	212	589	460	75	34	28	1
27 " ..	231	64	48	10	86	41	190	498	419	74	47	16	2
28 " ..	182	46	33	9	60	38	159	475	430	83	41	10	2
29 " ..	144	40	28	10	58	20	146	411	385	81	48	21	3
30 " ..	124	27	26	4	61	26	147	384	341	70	36	11	3
31 " ..	99	39	20	5	47	10	115	307	296	76	20	14	2
32 " ..	86	20	21	6	47	15	79	271	253	64	26	10	..
33 " ..	59	30	17	4	33	9	69	248	237	45	18	8	4
34 " ..	64	18	15	3	28	6	63	235	174	69	18	9	1
35 to 39 ..	203	66	50	13	96	34	259	758	614	182	76	34	11
40 " 44 ..	83	24	29	5	46	13	125	373	280	95	34	9	10
45 " 49 ..	56	18	11	4	27	5	68	199	175	56	32	8	8
50 and over	81	35	26	4	34	6	113	297	240	74	39	9	46
Not stated	..	..	..	..	..	..	..	..	..	..	..	..	..
Total ..	3,194	877	729	209	1,368	544	3,050	9,492	6,103	1,409	903	369	98
Average age— year 1924	27.70	28.57	28.00	26.95	27.86	27.01	28.94	28.41	30.40	13.91	28.95	28.04	45.89

8. *Fertility of Marriages.*—The quotient obtained by division of the nuptial births registered, *e.g.*, during the five years 1920 to 1924, by the number of marriages registered during the five years 1915 to 1919, *i.e.*, the period antecedent by five years to the period of the births, has been called the “fertility of marriages.” The quotient for this period is 3.36—in other words, the number of children to be expected from every marriage in Australia is about three. This method, while not absolutely accurate, generally furnishes results which agree fairly well with those found by more elaborate and careful investigation. For the following five-yearly periods the results were:—1916–20, 2.90; 1917–21, 2.91; 1918–22, 3.07; 1919–23, 3.25; and 1920–24, 3.36.

9. *Registration of Marriages.*—(i) *Marriages in each Denomination.* In all the States marriages may be celebrated either by ministers of religion whose names are registered for that purpose with the Registrar-General, or by certain civil officers—in most cases district registrars. Most of the marriages are celebrated by ministers of religion. The proportions so celebrated in 1924 were:—New South Wales, 94.69 per cent.; Victoria, 95.05 per cent.; Queensland, 95.68 per cent.; South Australia, 95.49 per cent.; Western Australia, 81.09 per cent.; and Tasmania, 96.99 per cent., the percentage for Australia being 94.30. The registered ministers in 1924 belonged to more than forty different denominations, some of which, however, can hardly be regarded as having any valid existence. A number of these have been omitted from the tabulation, and are bracketed under the heading “Other Christians.” The figures for 1924 are shown in the following table:—

MARRIAGES IN EACH DENOMINATION.—AUSTRALIA, 1924.

Denomination.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N. Ter.	Fed. Cap. Ter.	Australia.
Church of England ..	7,787	3,864	1,898	1,080	970	615	11	4	16,229
Roman Catholic ..	3,642	2,547	1,387	479	426	232	1	..	8,714
Methodist ..	2,189	1,831	1,012	1,280	333	273	1	..	6,919
Presbyterian ..	2,435	2,478	954	202	180	142	..	..	6,391
Congregational ..	409	791	136	225	86	50	..	..	1,697
Baptist ..	248	596	173	207	31	72	..	..	1,327
Church of Christ ..	140	279	23	215	31	52	..	..	740
Lutheran ..	26	63	134	176	6	..	..	..	405
Greek Catholic ..	28	14	7	..	10	..	..	..	59
Unitarian ..	6	8	..	5	..	..	..	..	19
Salvation Army ..	73	43	51	43	13	14	..	..	237
Seventh-Day Adventists ..	31	14	7	9	4	2	..	..	67
Other Christians ..	52	44	179	12	3	31	..	..	321
Hebrew ..	46	66	4	2	12	..	..	..	130
Registrar's Office ..	960	658	269	186	491	46	4	..	2,614
Unspecified ..	..	..	..	..	..	..	..	..	..
Total ..	18,072	13,296	6,234	4,121	2,596	1,529	17	4	45,869

(ii) *Number and Percentage in each Denomination, 1920 to 1924.*—The number of marriages according to denomination, and the percentages on total marriages, are shown in the next table:—

MARRIAGES IN EACH DENOMINATION.—AUSTRALIA, 1920 TO 1924.

Denomination.		1920.	1921.	1922.	1923.	1924.
Church of England	Total	18,859	16,499	15,877	15,783	16,229
	%	36.58	35.20	35.49	35.43	35.38
Roman Catholic	Total	9,141	8,458	8,304	8,240	8,714
	%	17.73	18.05	18.57	18.50	19.00
Methodist	Total	7,796	7,320	6,904	6,965	6,919
	%	15.12	15.62	15.43	15.64	15.09
Presbyterian	Total	7,097	6,808	6,345	6,268	6,391
	%	13.76	14.52	14.18	14.07	13.93
Congregational	Total	2,308	2,001	1,773	1,694	1,697
	%	4.48	4.27	3.96	3.80	3.70
Baptist	Total	1,744	1,461	1,356	1,342	1,327
	%	3.33	3.12	3.03	3.01	2.89
Church of Christ	Total	839	870	768	720	740
	%	1.63	1.86	1.72	1.62	1.61
Lutheran	Total	386	401	422	390	405
	%	0.75	0.86	0.94	0.88	0.88
Greek Catholic	Total	30	23	34	47	59
	%	0.06	0.05	0.08	0.11	0.13
Unitarian	Total	21	21	18	17	19
	%	0.04	0.04	0.04	0.04	0.04
Salvation Army	Total	302	227	214	225	237
	%	0.59	0.48	0.48	0.51	0.52
Seventh-Day Adventists	Total	60	57	56	60	67
	%	0.12	0.12	0.13	0.13	0.15
Other Christians	Total	628	527	483	424	321
	%	1.22	1.12	1.08	0.95	0.70
Hebrew	Total	111	113	90	100	130
	%	0.22	0.24	0.20	0.22	0.28
Registrar's Office	Total	2,198	2,074	2,075	2,263	2,614
	%	4.26	4.43	4.64	5.08	5.70
Unspecified	Total	32	9	12	3	..
	%	0.06	0.02	0.03	0.01	..
		51,552	46,869	44,731	44,541	45,869

§ 3. Deaths.

1. Male and Female Deaths, 1920 to 1924.—The total numbers of deaths registered in each year from 1920 to 1924 inclusive are given in the two following tables. The annual average of male deaths during the period was 30,935, and of female deaths 23,643, the details being as follow:—

MALE DEATHS, 1920 TO 1924.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	North Terr.	Fed. Cap. Terr.	Australia.
1920	12,088	9,059	4,824	2,814	2,161	1,055	48	4	32,053
1921	11,490	8,662	4,397	2,655	2,209	1,166	70	3	30,652
1922	11,014	8,187	4,372	2,537	1,994	1,084	52	5	29,245
1923	11,969	9,135	4,699	2,727	1,907	1,140	35	10	31,622
1924	11,887	8,863	4,440	2,644	2,039	1,177	42	11	31,103
Rate (a), 1924	10.46	10.87	10.19	9.84	10.58	10.96	16.47	4.45	10.50

(a) Number of deaths per 1,000 of mean male population.

FEMALE DEATHS, 1920 TO 1924.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	North. Terr.	Fed. Cap. Terr.	Austra- lia.
1920 ..	8,846	7,773	3,123	2,269	1,227	981	15	2	24,236
1921 ..	8,536	7,503	2,745	2,327	1,271	1,031	10	1	23,424
1922 ..	8,152	6,968	2,780	2,071	1,173	913	8	1	22,066
1923 ..	9,079	8,084	3,194	2,234	1,023	997	3	..	24,614
1924 ..	8,948	7,640	2,887	2,226	1,224	946	2	4	23,877
Rate (a), 1924	8.19	9.24	7.41	8.53	7.34	8.82	1.90	2.91	8.39

(a) Number of deaths per 1,000 of mean female population.

2. **Male and Female Death Rates, 1924.**—The crude male and female death rates for 1924 only are given in the last line of the preceding tables. Tasmania had the highest and South Australia the lowest rate for males, and for the females Victoria had the highest and Western Australia the lowest rate. The rates for the two Territories are based on very small numbers, and comparisons with the States would be misleading.

Owing to differences in age constitution in the six States, the crude rates are not, however, strictly comparable. A more satisfactory rate is furnished by the "Index of Mortality" (see sub-para. 13). The death rates for males and females in each State in five-year age groups for the three years 1920 to 1922, that is, for the Census year and for the year immediately preceding and following, are shown on page 987.

The rates for the five years 1920–1924 averaged about 10.9 per 1,000 for males, and 8.6 per 1,000 for females.

MALE AND FEMALE DEATH RATES (a).—AUSTRALIA, 1920 TO 1924.

Year.	1920.	1921.	1922.	1923.	1924.
Male rate	11.75	11.05	10.33	10.91	10.50
Female rate	9.21	8.73	8.06	8.82	8.39
Crude total rate	10.50	9.91	9.22	9.89	9.47

(a) Number of deaths per 1,000 of mean population.

3. **Total Deaths, 1920 to 1924.**—The total number of deaths during each of the five years 1920 to 1924 is given below :—

TOTAL DEATHS, 1920 TO 1924.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	North. Terr.	Fed. Cap. Terr.	Australia.
1920 ..	20,934	16,832	7,947	5,083	3,388	2,036	63	6	56,289
1921 ..	20,026	16,165	7,142	4,982	3,480	2,197	80	4	54,076
1922 ..	19,166	15,155	7,152	4,608	3,167	1,997	60	6	51,311
1923 ..	21,048	17,219	7,893	4,961	2,930	2,137	38	10	56,236
1924 ..	20,835	16,503	7,327	4,870	3,263	2,123	44	15	54,980

4. **Crude Death Rates, 1920 to 1924.**—The crude death rates for the five years 1920 to 1924 are given in the next table.

CRUDE DEATH RATES (a), 1920 TO 1924.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	North. Terr.	Fed. Cap. Terr.	Aus- tralia.
1920 ..	10.12	11.13	10.65	10.45	10.27	9.68	14.96	2.76	10.50
1921 ..	9.50	10.52	9.36	10.02	10.43	10.30	20.48	1.61	9.91
1922 ..	8.90	9.65	9.16	9.11	9.32	9.30	16.42	2.13	9.22
1923 ..	9.61	10.71	9.83	9.59	8.41	9.92	10.53	3.02	9.89
1924 ..	9.35	10.05	8.88	9.19	9.08	9.89	12.21	3.90	9.47

(a) Number of deaths per 1,000 of mean population.

5. **Death Rates of Various Countries.**—The following table gives particulars of the crude death rates of various countries for the latest available years :—

DEATH RATES (a).—VARIOUS COUNTRIES.

Country.	Year.	Crude Death Rate.	Country.	Year.	Crude Death Rate.
New Zealand ..	1924	8.3	Great Britain ..	1924	12.6
Queensland ..	1924	8.9	Canada (Quebec) ..	1922	13.3
Western Australia ..	1924	9.1	Belgium ..	1923	13.4
South Australia ..	1924	9.2	Prussia ..	1923	13.6
New South Wales ..	1924	9.4	Irish Free State ..	1924	14.3
Australia ..	1924	9.5	Scotland ..	1924	14.4
Netherlands ..	1924	9.6	Finland ..	1924	14.7
Union of South Africa (Whites) ..	1924	9.7	Czecho-Slovakia ..	1923	15.0
Canada (excluding Que- bec) ..	1924	9.8	Austria ..	1923	15.3
Tasmania ..	1924	9.9	Northern Ireland ..	1924	15.8
Victoria ..	1924	10.1	Italy ..	1923	16.6
Norway ..	1924	11.1	France ..	1924	17.2
Uruguay ..	1923	11.4	Spain ..	1924	19.7
Denmark ..	1924	11.4	Hungary ..	1924	20.1
Switzerland ..	1923	11.8	Bulgaria ..	1921	22.0
United States (Regis- tration Area) ..	1924	11.9	Russia, European ..	1923	22.7
Sweden ..	1924	12.0	Jamaica ..	1923	22.7
England and Wales ..	1924	12.2	Japan ..	1923	22.8
Germany ..	1924	12.2	Rumania ..	1922	22.8
			Ceylon ..	1923	30.6
			Chile ..	1923	32.8

(a) Number of deaths per 1,000 of mean population.

6. **Infantile Deaths and Death Rate.**—(i) *Australia, 1920 to 1924.* In the following table, which shows both the total number of deaths of children under one year and the rate per thousand live births since 1920, males and females are distinguished. The universal experience that during the first few years of life the higher death rate of male infants

tends to counteract the excess of male births is confirmed by the fact that out of 349,042 male infants born from 1920 to 1924, 23,669 (67.81 per 1,000) died during their first year of life, while of 331,207 female infants only 17,850 (53.89 per 1,000) died during the first year.

INFANTILE DEATHS AND DEATH RATES.—AUSTRALIA, 1920 TO 1924.

Year.	Registered deaths under one year.			Rate of Infantile Mortality (a).		
	Males.	Females.	Total.	Males.	Females.	Australia.
1920	5,386	4,045	9,431	76.66	61.15	69.14
1921	5,111	3,841	8,952	72.97	58.06	65.73
1922	4,279	2,972	7,251	60.82	44.42	52.74
1923	4,617	3,567	8,184	66.56	54.16	60.52
1924	4,276	3,425	7,701	62.15	51.79	57.08

(a) Number of deaths under 1 year per 1,000 live births registered.

(ii) *States, 1920 to 1924.* For the States and Territories the rates of infantile mortality during the last five years were as follows:—

INFANTILE MORTALITY RATES (a), 1920 TO 1924.

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	North. Terr.	Fed. Cap. Terr.	Aus- tralia.
1920 ..	69.41	73.70	63.24	67.34	66.02	65.51	190.48	66.67	69.14
1921 ..	62.56	72.55	54.16	65.48	78.26	78.02	63.29	74.07	65.73
1922 ..	53.60	53.35	50.38	47.50	55.59	55.70	57.14	31.25	52.74
1923 ..	60.68	65.70	53.95	60.30	56.02	57.45	13.89	..	60.52
1924 ..	58.93	61.32	51.30	51.33	49.87	54.99	35.09	48.78	57.08

(a) Number of deaths under 1 year per 1,000 live births registered.

The infantile mortality rate for Australia in 1922 was the lowest yet recorded, and was exceptionally low in all the States, South Australia occupying the premier position with a mortality of 47.50 per 1,000 births. Moreover, the death rate from almost every cause was low, though the greatest effect was from the comparatively low mortality from diarrhoea and enteritis and from pneumonia and whooping cough. Although the rate for 1924 was not so satisfactory as for 1922, it was much below the average for the preceding four years. In 1924, Western Australia had the lowest and Victoria the highest rate among the States.

(iii) *Districts.* The total number of births, of deaths of children under one year of age, and the average rate of infantile mortality for the five years 1920 to 1924 are shown in the following table for each of the fifty-nine districts for which the vital statistics have been tabulated. To afford a better indication of the geographical position of the districts the name of a town situated in a fairly central part of each district has been added. The figures for the Federal Capital Territory and for Lord Howe Island are included for the sake of completeness, but are too small to be used in comparison with others. Remarkable

variations are shown in the mortality rate for the various districts. The lowest rate was experienced in the north-western district of Western Australia (40.00 per 1,000 births), and the highest in the Trans-Darling Plains (Broken Hill) of New South Wales (114.77 per 1,000 births).

INFANTILE MORTALITY.—STATE DISTRICTS, 1920 TO 1924.

States and Territories.	Districts.	Towns.	Total Births, 1920-24.	Total Deaths of Children under one year, 1920-24.	Average Infantile Mortality per 1,000 Births, 1920-24.
New South Wales ..	Metropolitan ..	Sydney ..	113,664	7,152	62.02
" ..	North Coast ..	Grafton ..	22,560	1,066	47.25
" ..	Lower Hunter ..	Newcastle ..	29,827	1,987	66.62
" ..	Cumberland ..	Parramatta ..	15,485	757	48.89
" ..	South Coast ..	Nowra ..	10,009	573	57.25
" ..	Northern Tableland ..	Armidale ..	12,784	675	52.80
" ..	Central Tableland ..	Bathurst ..	16,262	1,096	67.40
" ..	Southern Tableland ..	Goulburn ..	13,703	897	65.46
" ..	North-Western Slope ..	Moree ..	5,334	320	59.99
" ..	Central-Western Slope ..	Dubbo ..	9,324	550	58.99
" ..	South-Western Slope ..	Temora ..	10,851	556	51.24
" ..	Riverina ..	Hay ..	6,303	369	58.54
" ..	Plains East of Darling ..	Cobar ..	1,485	109	73.40
" ..	Trans-Darling Plains ..	Broken Hill ..	3,947	453	114.77
" ..	Lord Howe Island ..	— ..	4	1	250.00
Victoria ..	Metropolitan ..	Melbourne ..	95,222	6,732	70.70
" ..	Central ..	Geelong ..	17,364	1,138	65.54
" ..	North-Central ..	Kyneton ..	6,138	339	55.23
" ..	Western ..	Hamilton ..	17,805	1,063	59.70
" ..	Wimmera ..	Horsham ..	7,227	429	59.36
" ..	Mallee ..	Ultima ..	6,967	462	66.31
" ..	Northern ..	Rochester ..	16,149	970	60.62
" ..	North-Eastern ..	Beechworth ..	4,651	232	49.88
" ..	Gippsland ..	Sale ..	8,586	385	44.84
Queensland ..	Metropolitan ..	Brisbane ..	31,200	1,904	61.03
" ..	Moreton ..	Ipswich ..	11,016	493	44.75
" ..	Wide Bay ..	Maryborough ..	11,995	530	44.19
" ..	Port Curtis ..	Rockhampton ..	7,577	460	60.71
" ..	Edgumbe ..	Townsville ..	9,634	527	54.70
" ..	Rockingham ..	Cairns ..	5,928	258	43.52
" ..	York Peninsula ..	Cooktown ..	1,032	76	73.64
" ..	Carpentaria ..	Croydon ..	1,616	105	64.98
" ..	Central-Western ..	Winton ..	545	39	71.56
" ..	South-Western ..	Charleville ..	1,387	106	76.42
" ..	Central ..	Blackall ..	3,209	189	58.90
" ..	Maranoa ..	Roma ..	1,789	104	58.13
" ..	Downs ..	Toowoomba ..	13,334	687	51.52
South Australia ..	Metropolitan ..	Adelaide ..	30,039	1,983	66.01
" ..	Central ..	Gawler ..	11,951	558	46.69
" ..	Lower North ..	Redruth ..	9,123	545	59.74
" ..	Upper North ..	Port Augusta ..	2,853	154	53.98
" ..	South-Eastern ..	Mount Gambier ..	2,903	120	41.34
" ..	Western ..	Port Lincoln ..	2,418	104	43.01
Western Australia ..	Metropolitan ..	Perth ..	20,983	1,376	65.58
" ..	Northern Agricultural ..	Geraldton ..	5,411	285	52.67
" ..	South-Western ..	Katanning ..	9,993	514	51.44
" ..	Eastern Goldfields ..	Kalgoorlie ..	2,967	219	73.81
" ..	Northern Goldfields ..	Pilbara ..	500	37	74.00
" ..	North-Western ..	Roebourne ..	200	8	40.00
" ..	Northern ..	Broome ..	188	18	95.74
Tasmania ..	Hobart ..	Hobart ..	7,979	558	69.93
" ..	Launceston ..	Launceston ..	4,393	308	70.11
" ..	North-Eastern ..	Scottsdale ..	2,616	149	56.96
" ..	North-Western ..	Stanley ..	7,345	428	58.27
" ..	Midland ..	Zeehan ..	2,591	132	50.95
" ..	South-Eastern ..	Sorell ..	2,807	153	54.51
" ..	South-Western ..	Franklin ..	621	42	67.63
Northern Territory ..	..	Darwin ..	321	24	70.38
Federal Capital Territory ..	..	Canberra ..	134	6	44.78

(iv) *Various Countries and Cities.* Compared with other countries, the States of Australia occupy a very favourable position, being surpassed by New Zealand only. There are, however, several continental cities which show better results than any Australian city shows. It may be pointed out also in connexion with the rates hereunder, that a high birth rate is often, though not invariably, accompanied by a high infantile death rate. The figures in the subjoined tables relate to the latest years for which returns are available :—

INFANTILE MORTALITY RATES (a).—VARIOUS COUNTRIES.

Country.	Year.	Rate of Infantile Mortality. (a)	Crude Birth Rate. (b)	Country.	Year.	Rate of Infantile Mortality. (a)	Crude Birth Rate. (b)
New Zealand ..	1924	40	21.6	Northern Ireland	1924	85	22.2
Western Australia	1924	50	23.1	France ..	1924	85	19.0
Queensland ..	1924	51	23.9	Italy ..	1923	88	29.1
South Australia ..	1924	51	21.9	Finland ..	1923	92	25.4
Netherlands ..	1924	51	24.9	Scotland ..	1924	98	21.9
Tasmania ..	1924	55	25.1	Belgium ..	1923	100	20.7
Norway ..	1922	55	23.1	Uruguay ..	1923	104	25.4
Australia ..	1924	57	23.2	Germany ..	1924	108	21.1
New South Wales	1924	59	24.1	Bulgaria ..	1919	109	40.2
Sweden ..	1924	60	18.1	Canada (Quebec)	1922	123	35.1
Victoria ..	1924	61	22.0	Prussia ..	1923	132	20.6
Switzerland ..	1922	70	19.6	Spain ..	1924	142	29.9
Irish Free State ..	1924	71	20.1	Egypt ..	1923	143	43.0
United States (Re- gistration Area)	1924	72	22.5	Czecho-Slovakia	1923	147	27.3
Union of South Africa (Whites)	1924	74	26.5	Austria ..	1921	155	22.9
England and Wales	1924	75	18.8	Japan ..	1923	163	34.9
Ontario (Canada)	1924	76	23.2	Jamaica ..	1922	177	37.3
Great Britain ..	1924	78	19.3	Hungary ..	1924	195	26.3
Canada (excluding Quebec)	1924	79	23.1	Rumania ..	1922	207	37.5
Denmark ..	1922	85	22.3	Ceylon ..	1923	212	39.1
				Russia, European	1909	248	44.0
				Chile ..	1923	283	39.4

(a) Number of deaths under 1 year per 1,000 births registered. (b) Number of births per 1,000 of mean population.

INFANTILE MORTALITY RATES (a).—VARIOUS CITIES.

City.	Year.	Rate of Infantile Mortality. (a)	City.	Year.	Rate of Infantile Mortality. (a)
Amsterdam ..	1924	34	Edinburgh ..	1924	89
Wellington ..	1924	38	Dresden ..	1924	91
Auckland ..	1924	46	Manchester ..	1924	97
Oslo ..	1924	47	Vienna ..	1924	99
Christchurch ..	1924	48	Cologne ..	1924	100
Stockholm ..	1924	50	Liverpool ..	1924	102
Perth ..	1924	53	Belfast ..	1924	107
San Francisco ..	1924	56	Berlin ..	1924	109
Adelaide ..	1924	56	Prague ..	1924	110
Sydney ..	1924	57	Dublin ..	1924	113
Brisbane ..	1924	58	Leipzig ..	1924	114
Hobart ..	1924	61	Glasgow ..	1924	119
Melbourne ..	1924	66	Aberdeen ..	1924	122
New York ..	1924	68	Munich ..	1924	129
London ..	1924	69	Breslau ..	1924	129
Newcastle, N.S.W.	1924	71	Warsaw ..	1923	147
Washington ..	1924	76	Buda Pest ..	1924	151
Copenhagen ..	1924	77	Lodz ..	1922	156
Toronto ..	1923	77	Montreal ..	1922	163
Chicago ..	1924	77	Madrid ..	1915	177
Detroit ..	1924	79	Florence ..	1916	192
Birmingham ..	1924	80	Leningrad ..	1912	249
Antwerp ..	1924	82	Madras ..	1923	253
Hamburg ..	1924	86	Colombo ..	1923	270
Paris ..	1924	88	Bombay ..	1924	460

(a) Number of deaths under 1 year per 1,000 births registered.

Information relative to the causes of death of children under one year of age will be found in sub-section 18.

7. Deaths in Age-Groups, 1920 to 1924.—A distribution into age-groups has been made of the 272,892 deaths which occurred in Australia from 1920 to 1924, and the results have been tabulated for each State. It is, however, sufficient to show here the results for Australia as a whole, which are as follows :—

DEATHS IN AGE GROUPS.—AUSTRALIA, 1920 TO 1924.

Age-Group.	Males.	Females.	Total.	Percentage on Total Males.	Percentage on Total Females.	Percentage on Total.
Under 1 year ..	23,669	17,850	41,519	15.30	15.10	15.22
1 year and under 5 ..	8,073	6,699	14,772	5.22	5.67	5.41
5 years and under 20 ..	7,774	6,330	14,104	5.03	5.35	5.17
20 years and under 40 ..	17,505	16,796	34,301	11.32	14.21	12.57
40 years and under 60 ..	33,434	21,778	55,212	21.61	18.42	20.23
60 years and under 65 ..	13,638	8,038	21,676	8.82	6.80	7.94
65 years and over ..	50,298	40,672	90,970	32.52	34.40	33.34
Age unspecified ..	284	54	338	0.18	0.05	0.12
Total ..	154,675	118,217	272,892	100.00	100.00	100.00

8. Deaths at Single Ages and in Age-Groups, 1924.—(i) *General.* The 54,980 deaths registered in Australia in the year 1924 will be found tabulated under single years, and in groups of five years for each State and Territory, in Bulletin No. 42, "Australian Demography, 1924." The deaths during the first two years of life have been tabulated in shorter periods. A summary for Australia is given in the following table :—

DEATHS AT SINGLE AGES AND IN AGE-GROUPS.—AUSTRALIA, 1924.

Ages.	Males.	Females.	Total.	Ages.	Males.	Females.	Total.
Total under 1 month ..	2,238	1,789	4,027	Total 20-24 years ..	707	687	1,394
" 1 month and under 3 ..	634	437	1,071	" 25-29 ..	690	770	1,460
" 3 months and under 6 ..	595	541	1,136	" 30-34 ..	885	893	1,778
" 6 months and under 12 ..	809	658	1,467	" 35-39 ..	1,086	934	2,020
				" 40-44 ..	1,256	903	2,159
				" 45-49 ..	1,503	994	2,497
Total under 1 year ..	4,276	3,425	7,701	" 50-54 ..	1,867	1,206	3,073
				" 55-59 ..	2,155	1,403	3,558
				" 60-64 ..	2,987	1,772	4,759
1 year and under 2 ..	755	658	1,413	" 65-69 ..	2,911	1,895	4,806
2 years ..	293	247	540	" 70-74 ..	2,625	1,766	4,391
3 " ..	218	180	398	" 75-79 ..	2,150	1,790	3,940
4 " ..	179	120	299	" 80-84 ..	1,673	1,609	3,282
				" 85-89 ..	876	971	1,847
				" 90-94 ..	383	381	764
Total under 5 years ..	5,721	4,630	10,351	" 95-99 ..	82	103	185
				" 100 and over ..	9	15	24
				Age Unspecified ..	22	3	25
Total 5-9 years ..	506	408	914				
" 10-14 ..	403	288	691				
" 15-19 ..	606	456	1,062				
				Total All Ages ..	31,103	23,877	54,980

(ii) *Rates.* The following tables give the death rate per 1,000 living at each age for the three years 1920, 1921, and 1922, i.e., the Census year 1921, and the years immediately preceding and following. The Northern Territory is included with South Australia, and the Federal Capital Territory with New South Wales :—

AVERAGE ANNUAL DEATH RATES.—AGE-GROUPS, 1920 TO 1922.

Age-Group.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
MALES.							
0 to 4 years ..	21.49	22.61	20.73	20.01	23.88	20.72	21.64
5 „ 9 „ ..	1.85	2.15	1.96	2.25	2.24	2.04	2.02
10 „ 14 „ ..	1.59	1.61	1.58	1.56	1.42	1.83	1.59
15 „ 19 „ ..	2.16	2.07	2.90	2.42	2.37	2.66	2.30
20 „ 24 „ ..	2.74	3.06	3.54	3.33	3.96	3.23	3.10
25 „ 29 „ ..	3.36	3.60	4.37	3.64	4.08	5.05	3.70
30 „ 34 „ ..	4.13	3.70	4.58	4.00	5.40	4.59	4.16
35 „ 39 „ ..	5.36	5.32	5.95	5.18	6.42	4.79	5.48
40 „ 44 „ ..	7.85	6.60	7.86	6.20	7.90	5.98	6.89
45 „ 49 „ ..	9.61	9.80	10.60	8.81	12.09	8.71	9.91
50 „ 54 „ ..	12.38	12.24	14.23	11.76	17.18	11.51	12.90
55 „ 59 „ ..	18.72	18.24	20.34	19.70	23.76	13.44	19.04
60 „ 64 „ ..	28.35	28.48	30.36	25.63	34.19	23.95	28.71
65 „ 69 „ ..	43.00	44.38	44.93	42.31	49.51	38.53	43.74
70 „ 74 „ ..	65.81	65.16	64.56	62.01	72.15	53.55	64.88
75 „ 79 „ ..	105.54	107.84	103.32	106.23	115.56	109.46	106.53
80 „ 84 „ ..	159.12	163.74	159.06	161.73	184.49	132.47	160.73
85 „ 89 „ ..	271.79	266.12	227.79	226.87	283.46	232.39	259.17
90 and over ..	368.58	387.01	314.96	387.09	566.67	350.00	376.08
FEMALES.							
0 to 4 years ..	16.92	17.91	16.05	16.25	18.80	16.74	17.09
5 „ 9 „ ..	1.66	1.95	1.89	2.27	1.28	2.09	1.82
10 „ 14 „ ..	1.21	1.20	1.43	1.34	1.23	1.63	1.27
15 „ 19 „ ..	1.63	2.00	1.99	2.72	1.34	2.58	1.90
20 „ 24 „ ..	2.43	2.92	2.81	2.85	3.07	3.74	2.75
25 „ 29 „ ..	3.47	3.55	3.61	3.85	3.99	3.87	3.59
30 „ 34 „ ..	3.85	4.13	4.11	4.21	4.60	4.41	4.06
35 „ 39 „ ..	4.64	4.98	5.80	5.18	4.90	5.98	5.00
40 „ 44 „ ..	5.15	5.74	6.03	4.98	6.39	5.48	5.51
45 „ 49 „ ..	6.71	6.91	6.76	6.40	8.12	7.31	6.87
50 „ 54 „ ..	9.35	9.11	9.11	9.10	10.62	8.61	9.27
55 „ 59 „ ..	13.17	12.87	13.60	10.85	12.81	14.23	12.92
60 „ 64 „ ..	19.08	19.06	19.71	18.27	17.78	20.13	19.05
65 „ 69 „ ..	31.69	31.69	30.81	32.89	30.49	34.72	31.76
70 „ 74 „ ..	50.24	51.83	50.61	45.65	54.20	49.42	50.43
75 „ 79 „ ..	88.19	88.52	88.10	83.98	96.43	80.32	87.81
80 „ 84 „ ..	140.29	143.71	126.40	132.25	137.07	126.00	138.32
85 „ 89 „ ..	225.11	231.45	210.65	193.54	219.51	208.79	221.44
90 and over ..	380.95	321.79	288.89	337.50	478.26	352.94	341.68
PERSONS.							
0 to 4 years ..	19.24	20.30	18.45	18.17	21.39	18.75	19.40
5 „ 9 „ ..	1.76	2.05	1.93	2.26	1.76	2.07	1.92
10 „ 14 „ ..	1.40	1.40	1.51	1.45	1.33	1.73	1.43
15 „ 19 „ ..	1.90	2.03	2.45	2.57	1.86	2.62	2.10
20 „ 24 „ ..	2.58	2.99	3.17	3.09	3.52	3.49	2.92
25 „ 29 „ ..	3.42	3.57	4.00	3.75	4.03	4.43	3.64
30 „ 34 „ ..	3.99	3.92	4.37	4.10	5.03	4.60	4.11
35 „ 39 „ ..	5.03	5.14	5.88	5.18	5.72	5.39	5.24
40 „ 44 „ ..	5.99	6.16	7.04	5.60	7.23	5.73	6.22
45 „ 49 „ ..	8.21	8.30	8.89	7.62	10.41	8.04	8.44
50 „ 54 „ ..	10.97	10.67	12.04	10.46	14.58	10.16	11.20
55 „ 59 „ ..	16.19	15.60	17.57	15.32	19.61	13.80	16.22
60 „ 64 „ ..	24.11	23.93	25.99	22.13	27.90	22.13	24.22
65 „ 69 „ ..	37.81	37.90	39.23	37.80	41.71	36.73	38.17
70 „ 74 „ ..	58.34	58.09	58.64	53.85	64.31	51.54	57.82
75 „ 79 „ ..	97.02	97.07	96.41	94.82	106.68	93.60	96.98
80 „ 84 „ ..	149.75	152.49	144.74	145.42	162.58	128.81	149.09
85 „ 89 „ ..	248.05	246.87	219.48	206.49	252.00	219.14	238.91
90 and over ..	374.81	349.09	304.15	355.73	528.30	351.64	357.36

The tables show a high death rate for children under five years of age, but it rapidly diminishes until, at ages 10 to 14, the rate is 1.43 per 1,000, which is the lowest at any age. The rate thereafter gradually rises with increasing age until, at the ages 90 and over, more than one-third die every year.

9. Deaths of Centenarians, 1924.—Particulars concerning the twenty-four persons who died in 1924 aged 100 years and upwards, are given in the following table. It must, of course, be understood that while the Registrars-General of the various States take the greatest care to have statements as to abnormally high ages verified as far as possible, absolute reliance cannot be placed on the accuracy of the ages shown, owing to the well-known tendency of very old people to overstate their ages. No attempt has been made by the Commonwealth Bureau of Census and Statistics to verify the truth of the statements made. The fact must not be disregarded in connexion with this question that while parish registers in the United Kingdom often date very far back, compulsory registration of births dates practically only from 1874, the Act passed in 1836 having left many loop-holes open for those unwilling to register the births of their children.

DEATHS OF CENTENARIANS.—AUSTRALIA, 1924.

Age.	Locality where Death occurred.	State.	Cause of Death.	Occupation.	Birthplace.	Length of Residence in Australia.	Conjugal Condition.
MALES.							
127	Brisbane ..	Queensland	Senility ..	Gardener ..	China ..	108 years	Single
105	" ..	" ..	" ..	Farmer ..	Ireland ..	21 years ..	"
104	Liverpool ..	N.S.W. ..	Chronic bronchitis	Labourer ..	Ireland ..	47 years ..	"
104	Granville ..	" ..	Senility ..	Unspecified	" ..	80 years ..	"
102	Hobart ..	Tasmania	Cerebral hæmorrhage	Clerk ..	England ..	80 years ..	Married
101	Warragul ..	Victoria ..	Arterio-sclerosis	Unspecified	Unspecified	Unspecified	Unspecified
100	Balmain Nth.	N.S.W. ..	Hypostatic pneumonia	Carrier ..	Ireland ..	46 years ..	Married
100	Lethbridge	Victoria ..	Senility ..	Farmer ..	N.S.W. ..	Native ..	"
100	Brisbane ..	Queensland	" ..	Labourer ..	Ireland ..	85 years	Single

FEMALES.

103	Wagga	N.S.W. ..	Senility ..	" ..	Ireland ..	88 years ..	Married
	Wagga	" ..	" ..	" ..	" ..	" ..	"
103	Goondiwindi	Queensland	" ..	" ..	N.S.W. ..	Native ..	"
102	Nyah ..	Victoria ..	" ..	" ..	Scotland	72 years ..	"
102	Richmond ..	" ..	" ..	" ..	England ..	74 years ..	"
102	St. Kilda ..	" ..	" ..	" ..	" ..	85 years ..	"
102	Hotham West	" ..	" ..	" ..	" ..	70 years ..	"
101	Ryde ..	N.S.W. ..	" ..	" ..	N.S.W. ..	Native ..	"
101	Petersham	" ..	" ..	" ..	Scotland	70 years ..	"
101	Manly ..	" ..	" ..	" ..	" ..	54 years ..	"
101	Grafton ..	" ..	Mitral regurgitation	" ..	" ..	32 years ..	"
101	Essendon ..	Victoria ..	Senility ..	" ..	England ..	74 years ..	"
100	Queanbeyan	N.S.W. ..	" ..	" ..	Ireland ..	80 years ..	"
100	Northcote ..	Victoria ..	" ..	" ..	" ..	64 years ..	"
100	Perth ..	W. Australia	" ..	" ..	" ..	50 years ..	"
100	Launceston	Tasmania	" ..	" ..	" ..	86 years ..	"

10. Length of Residence in Australia of Persons who Died in 1924.—The length of residence in Australia of all persons whose deaths were registered in the year 1924 has been tabulated for all the States, and a summary of the results is shown below :—

LENGTH OF RESIDENCE IN AUSTRALIA OF PERSONS WHO DIED IN 1924.

Length of Residence.	Male Deaths.	Female Deaths.	Total Deaths.	Length of Residence.	Male Deaths.	Female Deaths.	Total Deaths.
Born in Australia ..	19,591	16,398	35,989	Resident 25 to 29 years ..	341	146	487
Resident under 1 year ..	153	47	200	" 30 to 34 ..	604	298	902
" 1 year ..	90	38	128	" 35 to 39 ..	837	515	1,352
" 2 years ..	80	50	130	" 40 to 44 ..	1,486	773	2,259
" 3 ..	65	54	119	" 45 to 49 ..	762	443	1,205
" 4 ..	57	68	125	" 50 to 54 ..	801	528	1,329
" 5 ..	25	33	58	" 55 to 59 ..	486	429	915
" 6 ..	14	8	22	" 60 to 64 ..	913	863	1,781
" 7 ..	15	10	25	" 65 yrs. and over ..	1,692	1,885	3,577
" 8 ..	27	14	41	Length of residence not stated ..	1,732	509	2,241
" 9 ..	46	24	70				
" 10 to 14 years ..	677	469	1,146				
" 15 to 19 ..	291	120	411				
" 20 to 24 ..	318	150	468	Total ..	31,103	23,877	54,980

11. Birthplaces of Persons who Died in 1924.—The following table gives the birthplaces of persons whose deaths were registered in 1924. Full particulars will be found in "Australian Demography," Bulletin No. 42.

BIRTHPLACES OF PERSONS WHO DIED IN 1924.—AUSTRALIA.

Birthplace.	Males.	Females.	Persons.	Birthplace.	Males.	Females.	Persons.
AUSTRALASIA—				ASIA—			
New South Wales ..	7,416	6,236	13,652	British India and Ceylon ..	103	28	131
Victoria ..	6,343	5,278	11,621	Other Brit. Posses- sions in Asia ..	11	1	12
Queensland ..	2,047	1,641	3,688	China ..	280	2	282
South Australia ..	1,965	1,711	3,676	Japan ..	19	3	22
Western Australia ..	577	501	1,078	Other Asiatic Countries ..	45	10	55
Tasmania ..	1,235	1,027	2,262		458	44	502
Northern Territory ..	8	2	10	AFRICA—			
Federal Capital Territory ..	..	2	2	Union of Sth. Africa ..	22	12	34
Papua ..	11	3	14	Other Brit. Posses- sions in Africa ..	9	4	13
Territory of New Guinea ..	1	..	1	Other African Countries ..	8	3	11
New Zealand ..	194	138	332		39	19	58
	19,797	16,539	36,336	AMERICA—			
EUROPE—				Canada ..	53	20	73
England ..	5,128	3,506	8,634	Other Brit. Posses- sions in America ..	6	4	10
Wales ..	185	123	308	United States of America ..	77	33	110
Scotland ..	1,451	1,005	2,456	Other American Countries ..	25	11	36
Ireland ..	2,007	1,908	3,915		161	68	229
Other Brit. Posses sions in Europe ..	36	21	57	POLYNESIA—			
Austria ..	15	5	20	British Posses- sions in Polynesia ..	5	5	10
Denmark ..	118	36	154	Other Polynesian Islands ..	41	8	49
France ..	52	23	75		46	13	59
Germany ..	434	256	690	At Sea ..	61	67	128
Greece ..	33	4	37	Unspecified ..	596	147	743
Italy ..	97	20	117				
Netherlands ..	15	4	19				
Norway ..	57	4	61				
Russia ..	42	19	61				
Sweden ..	138	14	152				
Switzerland ..	40	10	50				
Other European Countries ..	97	22	119				
	9,945	6,980	16,925	Total Deaths ..	31,103	23,877	54,980

12. Occupations of Males who Died in 1924.—(i) *Australia, 1924.* Information as to the occupations of the 31,103 males who died in Australia in 1924 is contained in the following statement :—

OCCUPATIONS OF MALES WHO DIED IN 1924.—AUSTRALIA.

Occupation.	No. of Deaths.	Occupation.	No. of Deaths.
CLASS I.—PROFESSIONAL.		CLASS III.—COMMERCIAL—cont.	
General Government	162	Hay, corn, etc.	23
Local Government	21	Other vegetable matter	12
Defence	75	Wood and coal	27
Law and order	236	Stone, clay, glass	4
Religion	110	Ironmongery	21
Charity	4	Merchants	115
Health	211	Shopkeepers and assistants	254
Literature	47	Dealers and hawkers	129
Science	8	Agents and brokers	138
Civil and mechanical engineering, architecture and surveying	101	Clerks, bookkeepers, etc.	724
Education	132	Commercial travellers and salesmen	274
Fine arts	33	Others engaged in commercial pursuits	247
Music	46	Speculators on chance events	14
Amusements	141	Storage	1
Total Professional	1,327	Total Commercial	3,063
CLASS II.—DOMESTIC.		CLASS IV.—TRANSPORT AND COMMUNICATION.	
Hotelkeepers and assistants	342	Railway traffic	602
Others engaged in providing board and lodging	107	Tramway traffic	73
House servants	6	Road traffic	625
Coachmen and grooms	54	Sea and river traffic	552
Hairdressers	76	Postal service	101
Laundrymen	10	Telegraph and telephone service	71
Others engaged in domestic occu- pations	207	Messengers, etc.	17
Total Domestic	802	Total Transport and Commu- nication	2,041
CLASS III.—COMMERCIAL.		CLASS V.—INDUSTRIAL.	
Banking and finance	124	Books and publications	155
Insurance and valuation	85	Musical instruments	13
Land and household property	53	Prints, pictures and art materials	7
Property rights, n.e.i.	1	Ornaments and small wares	21
Books, publications and advertising	45	Sports and games	1
Musical Instruments	4	Designs, medals, type and dies	7
Prints, pictures, and art materials	4	Watches and clocks	28
Watches, clocks, jewellery	1	Surgical instruments	2
Machines, tools, etc.	1	Arms and ammunition	1
Carriages and vehicles	3	Engines, machines, tools, etc.	181
Ships and boats	5	Carriages and vehicles	176
Building materials	5	Harness, saddlery and leatherware	95
Furniture	3	Ships, boats and equipment	58
Paper and stationery	12	Furniture	122
Textile fabrics	102	Building materials	132
Dress	17	Chemicals and by-products	4
Animal food	294	Textile fabrics	34
Vegetable food	83	Dress	444
Groceries and stimulants	190	Fibrous materials	8
Living animals	33	Animal food	37
Leather, raw materials	5	Vegetable food	205
Wool and tallow	10	Groceries and stimulants	62
		Animal matter	54

OCCUPATIONS OF MALES WHO DIED IN 1924.—AUSTRALIA—*continued.*

Occupation.	No. of Deaths.	Occupation.	No. of Deaths.
CLASS V.—INDUSTRIAL—<i>cont.</i>		CLASS VI.—AGRICULTURAL, PASTORAL, MINING PURSUITS, ETC.	
Workers in wood not elsewhere classed	26	Agricultural	3,385
Vegetable produce for fodder	2	Pastoral	886
Paper	3	Dairy farming	84
Stone, clay, glass	94	Bees, fisheries and wild animals	96
Jewellery and precious stones	37	Forestry	110
Metals, other than gold and silver	403	Water conservation and supply	27
Gas, electric lighting, etc.	97	Mines and quarries	1,371
Building—			
Builders	120	Total Primary Producers	5,959
Stonemasons	73		
Bricklayers	121	CLASS VII.—INDEFINITE.	
Slaters	5	Independent means, having no specified occupation	686
Carpenters	544	Occupation unspecified	745
Plasterers	70		
Painters and glaziers	254	Total Indefinite	1,431
Plumbers	96		
Signwriters	6	CLASS VIII.—DEPENDENTS.	
Others	1	Dependent relatives (including persons under 20 years of age with no specified occupation)	6,785
Roads, railways and earthworks	61	Supported by voluntary and State contributions	185
Disposal of refuse	30		
Other industrial workers—		Total Dependents	6,970
Manufacturers	72	Total Male Deaths	31,103
Engineers, firemen	491		
Contractors	273		
Labourers, undefined	4,745		
Others	39		
Total Industrial	9,510		

(ii) *Australia, 1920 to 1924.* The male deaths in Australia grouped according to the main classes of occupations, and the percentage of each class on the total male deaths for the five years 1920 to 1924, are shown in the table hereunder :—

OCCUPATIONS OF MALES WHO DIED IN AUSTRALIA, 1920 TO 1924.

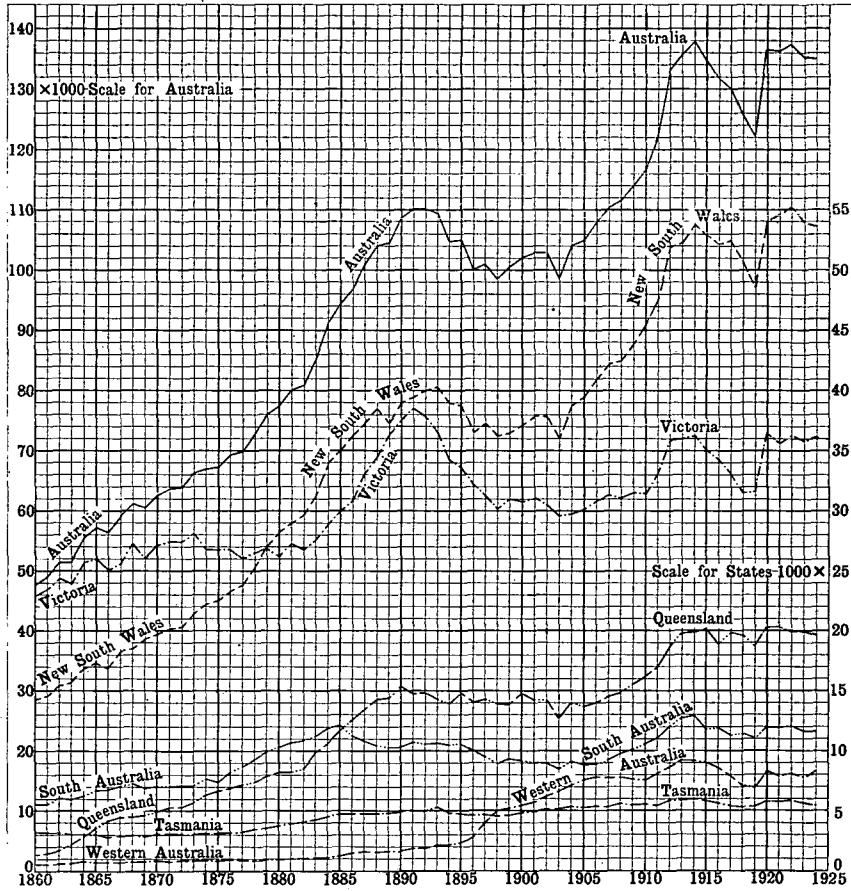
Occupation.	1920.	1921.	1922.	1923.	1924.
Class					
I. Professional .. { Total	1,391	1,307	1,317	1,339	1,327
{ Per cent.	4.34	4.26	4.50	4.23	4.27
II. Domestic .. { Total	739	830	745	803	802
{ Per cent.	2.30	2.71	2.55	2.54	2.58
III. Commercial .. { Total	2,814	2,739	2,871	2,914	3,063
{ Per cent.	8.78	8.94	9.32	9.22	9.85
IV. Transport and communication .. { Total	1,910	1,841	1,842	1,931	2,041
{ Per cent.	5.96	6.01	6.30	6.11	6.56
V. Industrial .. { Total	8,849	8,613	8,592	9,509	9,510
{ Per cent.	27.61	28.10	29.38	30.07	30.57
VI. Agricultural, Pastoral, Mining, etc. { Total	5,786	5,711	5,664	5,902	5,959
{ Per cent.	18.05	18.63	19.37	18.66	19.16
VII. Indefinite .. { Total	1,595	1,436	1,378	1,866	1,431
{ Per cent.	4.98	4.68	4.71	5.90	4.60
VIII. Dependents .. { Total	8,969	8,175	6,836	7,358	6,970
{ Per cent.	27.98	26.67	23.37	23.27	22.41
Total	32,053	30,652	29,245	31,622	31,103

13. **Index of Mortality.**—(i) *For Year 1924.* The death rates—those for age-groups on page 987 excepted—so far quoted are crude rates, *i.e.*, they simply show the number of deaths per thousand of mean population, without taking the age constitution into consideration. Other conditions being equal, however, the death rate of a country will be lower if it contains a large percentage of young people (not infants). In order to obtain a comparison of the mortality of various countries on a uniform basis so far as age constitution is concerned, the International Statistical Institute in its 1895 session recommended the universal adoption of the population of Sweden in five age-groups, as ascertained at the Census of 1890, as the standard population by which the "Index of Mortality," as distinguished from the crude death rate, should be ascertained. The calculation for 1924 is shown below for each of the States and Territories and for Australia, the distribution of the mean population of 1924 into age-groups being in accordance with the Census of 1921 :—

INDEX OF MORTALITY, 1924.

Age-Group.	Mean Population, 1924, distributed according to Results of Census of 1921.	Number of Deaths, 1924.	No. of Deaths per 1,000 of Mean Population, 1924, in each Age-Group.	Age Distribution per 1,000 of Standard Population.	Index of Mortality.
NEW SOUTH WALES.					
Under 1 year	56,537	3,165	55.98	25.5	1.43
1 year and under 20	851,108	2,061	2.42	398.0	0.96
20 years " 40	730,117	2,533	3.47	269.6	0.94
40 " " 60	428,803	4,212	9.82	192.3	1.89
60 " and upwards	161,772	8,864	54.79	114.6	6.28
Total	2,228,337	20,835	9.35	1,000.0	11.50
VICTORIA.					
Under 1 year	37,404	2,216	59.25	25.5	1.51
1 year and under 20	592,593	1,427	2.41	398.0	0.96
20 years " 40	525,504	1,880	3.58	269.6	0.97
40 " " 60	350,217	3,361	9.60	192.3	1.85
60 " and upwards	136,134	7,619	55.97	114.6	6.41
Total	1,641,852	16,503	10.05	1,000.0	11.70
QUEENSLAND.					
Under 1 year	22,163	1,011	45.62	25.5	1.16
1 year and under 20	324,957	869	2.67	398.0	1.06
20 years " 40	269,994	986	3.65	269.6	0.98
40 " " 60	152,123	1,514	9.95	192.3	1.91
60 " and upwards	55,914	2,947	52.71	114.6	6.04
Total	825,151	7,327	8.88	1,000.0	11.15
SOUTH AUSTRALIA.					
Under 1 year	12,563	595	47.36	25.5	1.21
1 year and under 20	199,574	371	1.86	398.0	0.74
20 years " 40	172,135	601	3.49	269.6	0.94
40 " " 60	101,382	916	9.04	192.3	1.74
60 " and upwards	44,037	2,387	54.20	114.6	6.21
Total	529,691	4,870	9.19	1,000.0	10.84

BIRTHS—1860 TO 1924.



EXPLANATION.—The base of each small square represents an interval of one year for both Australia and States, and the vertical height represents 2,000 persons for Australia and 1,000 for the States.

The scale on the left relates to Australia, and that on the right to the States.

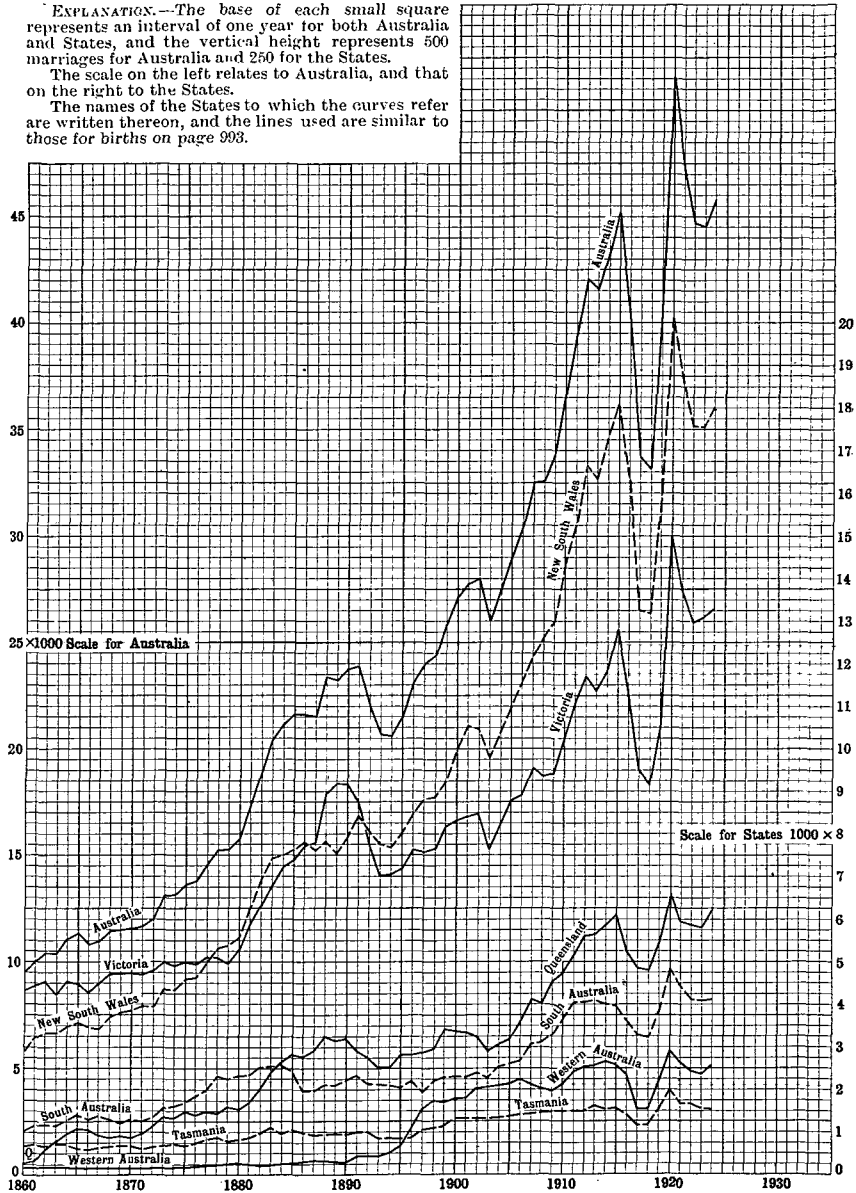
The names of the States to which the curves refer are written thereon, and the characters of the lines used are as follows:—Australia, —————; New South Wales, —————; Victoria, —————; Queensland, —————; South Australia, —————; Western Australia, —————; Tasmania, —————.

MARRIAGES, 1860 TO 1924.

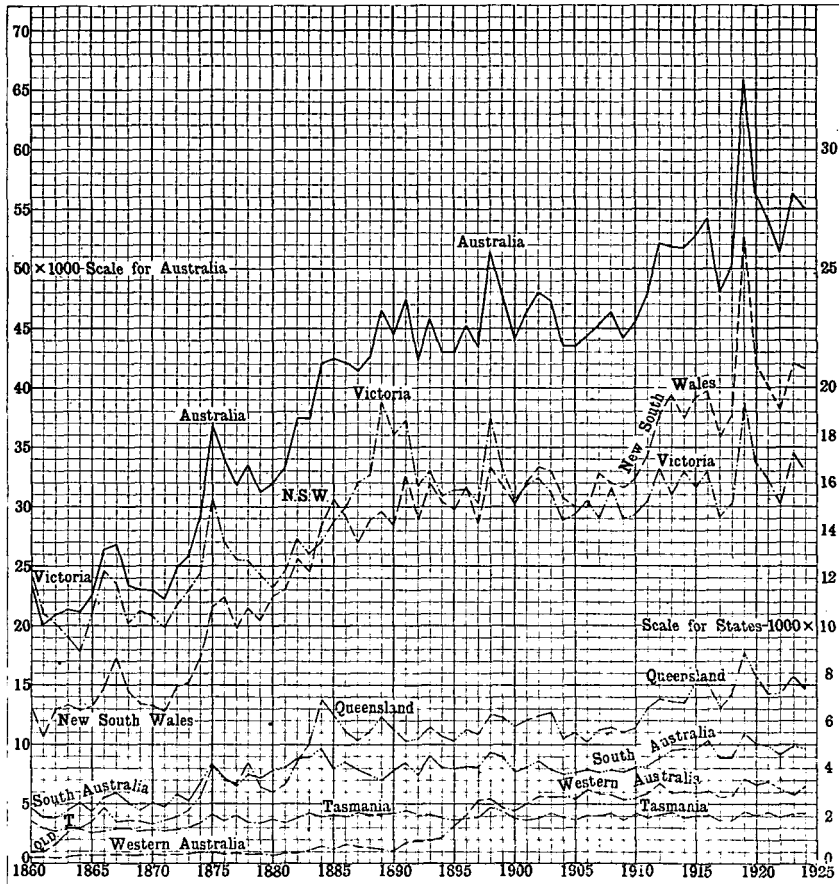
EXPLANATION.—The base of each small square represents an interval of one year for both Australia and States, and the vertical height represents 500 marriages for Australia and 250 for the States.

The scale on the left relates to Australia, and that on the right to the States.

The names of the States to which the curves refer are written thereon, and the lines used are similar to those for births on page 993.



DEATHS—1860 TO 1924.

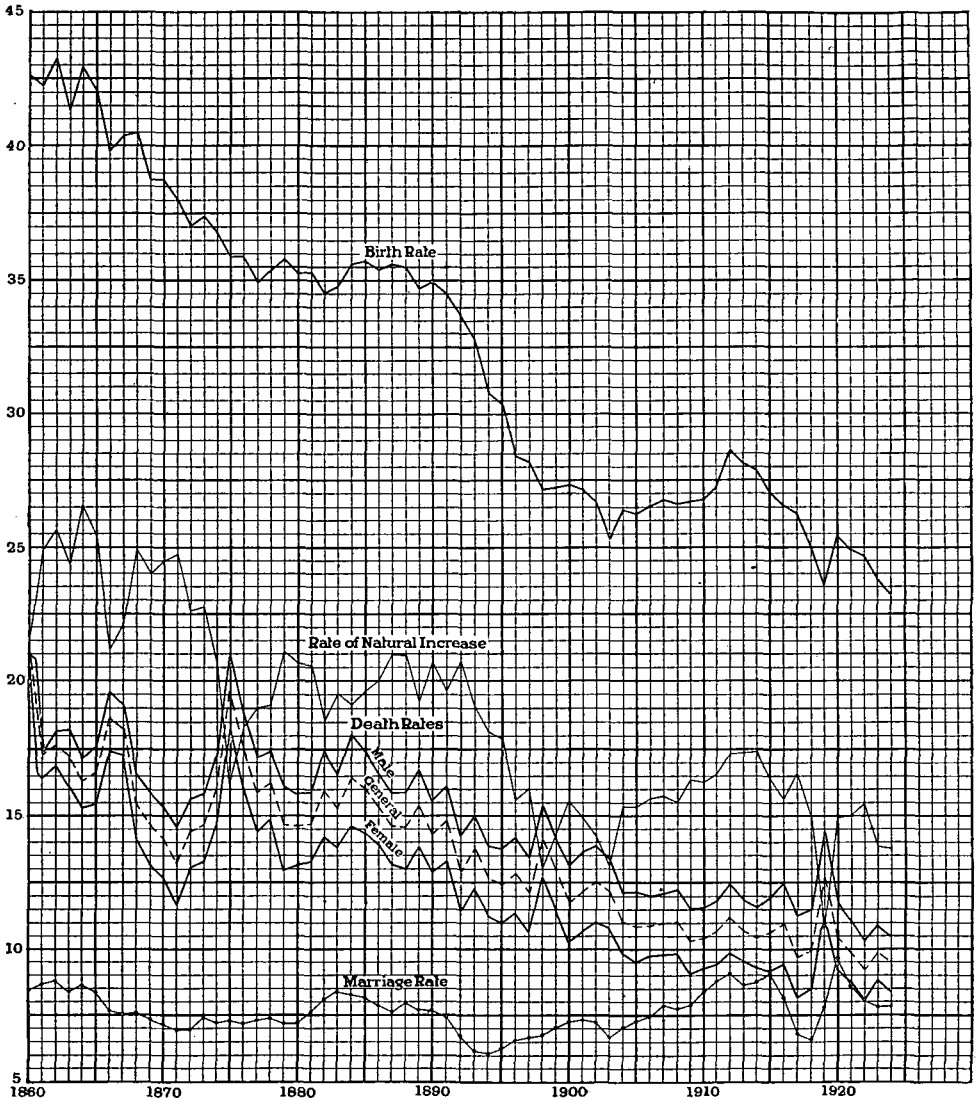


EXPLANATION.—The base of each small square represents an interval of one year for both Australia and States, and the vertical height represents 1,000 persons for Australia and 500 for the States.

The scale on the left relates to Australia, and that on the right to the States.

The names of the States to which the curves refer are written thereon, and the lines used are similar to those for births on page 993.

GENERAL BIRTH, NATURAL INCREASE, DEATH (MALE, GENERAL AND FEMALE) AND MARRIAGE
RATES—AUSTRALIA, 1860 TO 1924.



EXPLANATION.—The base of each small square represents one year's interval, and the vertical height one half per thousand of the population—the basic line being five per thousand of the population.

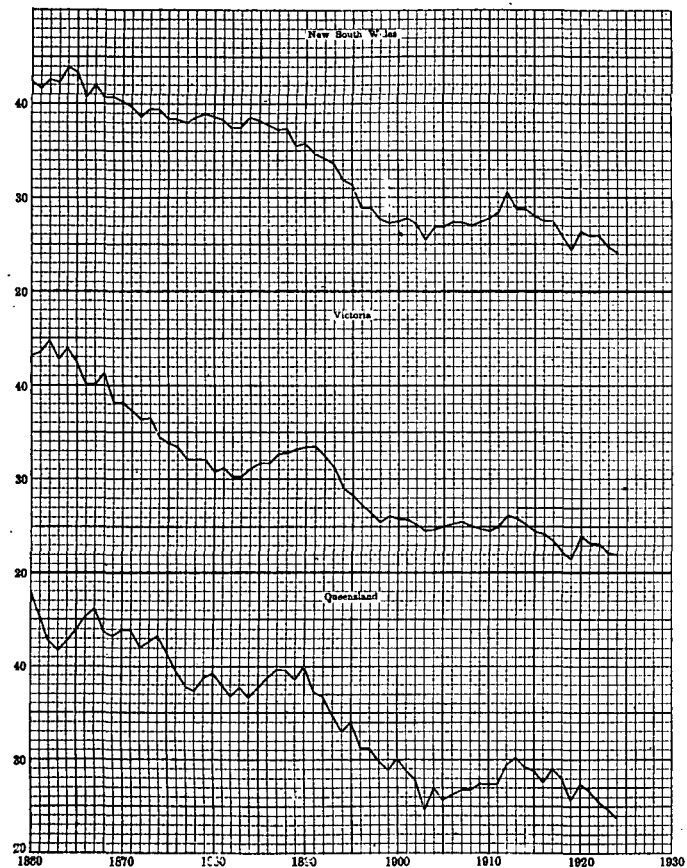
STATE BIRTH-RATE GRAPHS. (See page 997.)

EXPLANATION.—The base of each small square represents one year's interval, and the vertical height one birth per thousand of the population—the basic line for each State being twenty per thousand of the population.

STATE DEATH-RATE GRAPHS. (See page 998.)

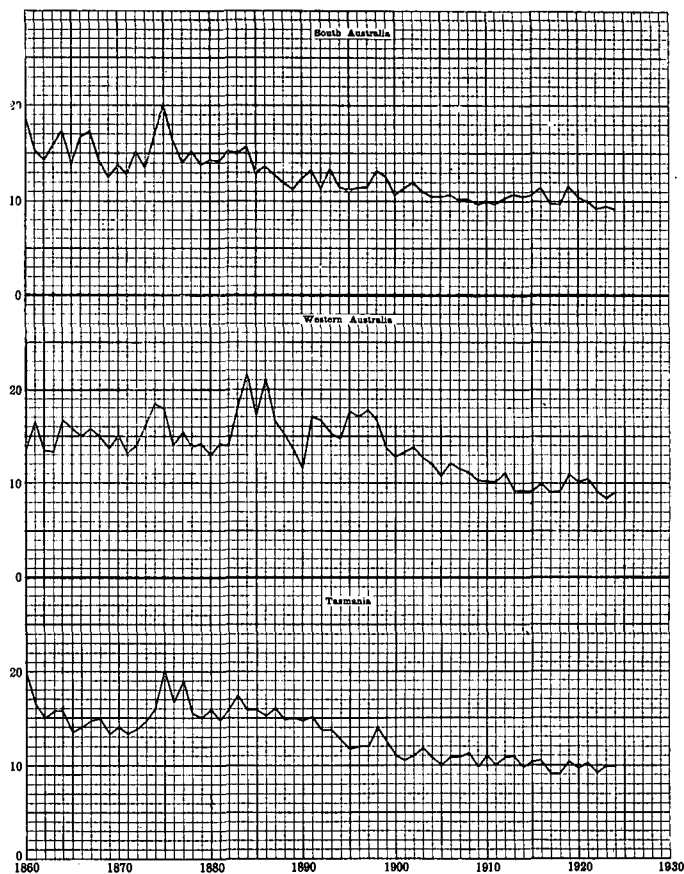
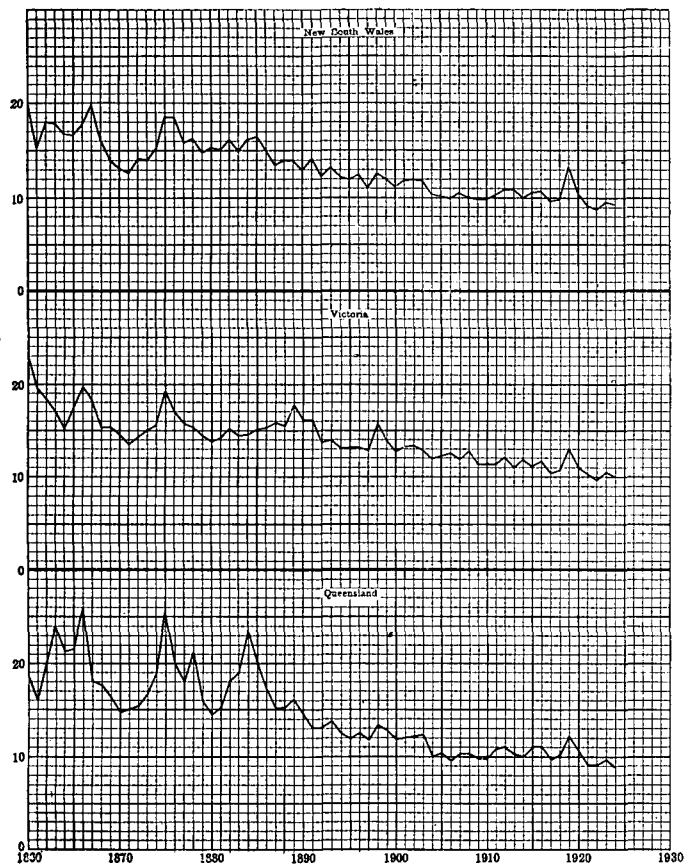
EXPLANATION.—The base of each small square represents one year's interval, and the vertical height one death per thousand of the population. The zero for each State is shown by a thickened line.

BIRTH RATES—STATES, 1860-1924.



For explanation of above graph see page 996.

DEATH RATES—STATES, 1860-1924.



For explanation of above graph see page 996.

INDEX OF MORTALITY, 1924—*continued.*

Age-Group.	Mean Population, 1924, distributed according to Results of Census of 1921.	Number of Deaths, 1924.	No. of Deaths per 1,000 of Mean Population, 1924, in each Age-Group.	Age Distribution per 1,000 of Standard Population.	Index of Mortality.
WESTERN AUSTRALIA.					
Under 1 year	8,423	414	49.15	25.5	1.25
1 year and under 20	140,774	343	2.44	398.0	0.97
20 years " 40	106,040	406	3.83	269.6	1.03
40 " " 60	82,912	898	10.83	192.3	2.08
60 " and upwards.. ..	21,372	1,202	56.24	114.6	6.45
Total	359,521	3,263	9.08	1,000.0	11.78
TASMANIA.					
Under 1 year	5,664	296	52.26	25.5	1.33
1 year and under 20	88,282	241	2.73	398.0	1.09
20 years " 40	64,217	246	3.83	269.6	1.03
40 " " 60	39,510	373	9.44	192.3	1.82
60 " and upwards.. ..	17,014	967	56.84	114.6	6.51
Total	214,687	2,123	9.89	1,000.0	11.78
NORTHERN TERRITORY.					
Under 1 year	75	2	26.67	25.5	0.68
1 year and under 20	892	2	2.24	398.0	0.89
20 years " 40	1,177	3	2.55	269.6	0.69
40 " " 60	1,046	13	12.43	192.3	2.39
60 " and upwards.. ..	413	24	58.11	114.6	6.66
Total	3,603	44	12.21	1,000.0	11.31
FEDERAL CAPITAL TERRITORY.					
Under 1 year	93	2	21.51	25.5	0.55
1 year and under 20	1,572	3	1.91	398.0	0.76
20 years " 40	1,335	1	0.75	269.6	0.20
40 " " 60	648	6	9.26	192.3	1.78
60 " and upwards.. ..	200	3	15.00	114.6	1.72
Total	3,848	15	3.90	1,000.0	5.01
AUSTRALIA.					
Under 1 year	142,922	7,701	53.88	25.5	1.37
1 year and under 20	2,199,752	5,317	2.42	398.0	0.96
20 years " 40	1,870,519	6,656	3.56	269.6	0.96
40 " " 60	1,156,641	11,293	9.76	192.3	1.88
60 " and upwards.. ..	436,856	24,013	54.97	114.6	6.30
Total	5,806,690	54,980	9.47	1,000.0	11.47

NOTE.—The small number of persons whose ages were not ascertained at the 1921 Census has been proportionately distributed among the various age-groups, and the same plan has been followed in regard to the 23 persons who died in 1924, whose ages were not stated in the certificate of death.

On the basis of the crude rates there is a range of 1.17 per 1,000 persons between the lowest rate in Queensland (8.88) and the highest rate in Victoria (10.05), whereas the adjusted rates reduce the range to 0.94 per 1,000, i.e. between 10.84 in South Australia and 11.78 in Western Australia and Tasmania. In its application to the figures for 1924 the process of adjustment completely altered the relative positions of the various States

from those determined by the crude rates. The principal changes were that South Australia from third position took the premier place from Queensland. Western Australia from second place was made to share the lowest position with Tasmania, to the advantage of Victoria which was thus promoted from the lowest position on the basis of crude rates to the fourth position on the adjusted basis.

(ii) *Years 1920 to 1924.* For purposes of comparison with previous years the index of mortality is shown in the following table for each of the five years 1920 to 1924 :—

INDEX OF MORTALITY, 1920 TO 1924.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Northern Territory.	Federal Capital Territory.	Australia.
1920 ..	13.32	13.72	14.36	13.49	15.63	12.28	18.27	3.20	13.65
1921 ..	12.27	12.85	12.30	12.47	15.60	13.16	22.38	2.15	12.66
1922 ..	10.91	11.20	11.38	10.62	11.80	10.88	13.93	2.91	11.10
1923 ..	11.79	12.44	12.35	11.24	10.74	11.80	9.69	3.54	11.95
1924 ..	11.50	11.70	11.15	10.84	11.78	11.78	11.31	5.01	11.47

14. **Causes of Death.**—(i) *General.* The classification adopted by the Commonwealth Bureau of Census and Statistics is that of the International Institute of Statistics, as amended by the Committees of Revision which met in 1909 and 1920. The detailed classification groups causes of death under 205 different headings in fifteen categories, as follows :—

- | | |
|---|--|
| <ul style="list-style-type: none"> i. Epidemic, Endemic, and Infectious Diseases. ii. General Diseases not included in (i). iii. Diseases of the Nervous System and Organs of Sense. iv. Diseases of the Circulatory System. v. Diseases of the Respiratory System. vi. Diseases of the Digestive System. vii. Diseases of the Genito-urinary System and Adnexa. | <ul style="list-style-type: none"> viii. Puerperal Condition. ix. Diseases of the Skin and Cellular Tissue. x. Diseases of the Organs of Locomotion. xi. Malformations. xii. Early Infancy. xiii. Old Age. xiv. External Causes. xv. Ill-defined Diseases. |
|---|--|

(ii) *Compilation of Vital Statistics for 1907 and Subsequent Years in Commonwealth Bureau.* The vital statistics of Australia from the year 1907 onward have been tabulated according to this classification in the Commonwealth Bureau, and the system is being employed in all the State offices in the preparation of their bulletins of vital statistics.

(iii) *Classification of Causes of Death, 1920 to 1924, according to Abridged International Classification.* An abridged classification, which enumerates thirty-eight diseases and groups of diseases according to the revised classification, is in use in many European and American States, while the Australian statistics have been compiled on the detailed classification. A table has been prepared showing the causes of death according to the abridged classification, so that the results may be compared with those of countries which use the abridged index.

The compilations for the years 1920 to 1924 will be found in full in Bulletins Nos. 38 to 42 of "Australian Demography"; here it will suffice to give the abridged classification under thirty-eight headings for the year 1924.

CAUSES OF DEATH.—MALES, 1924.

Cause.	N.S.W.	Vic.	Q'land.	S. Aus.	W. Aus.	Tas.	Nor. Ter.	Fed. Cap. Ter.	Aus- tralia.
1 Typhoid Fever ..	56	19	29	7	10	6	..	..	127
2 Typhus Fever ..	..	..	..	..	..	..	..	..	..
3 Malaria ..	2	3	11	..	1	..	3	..	20
4 Small-pox ..	..	..	..	..	..	..	..	..	..
5 Measles ..	20	3	13	..	23	4	..	..	63
6 Scarlet Fever ..	7	7	1	1	..	2	..	..	18
7 Whooping Cough ..	32	116	10	19	12	6	..	..	195
8 Diphtheria ..	92	69	28	13	6	14	..	..	222
9 Influenza—Pneumonic	55	54	41	7	19	6	..	..	182
9a Influenza—other ..	55	30	22	5	2	1	..	..	115
10 Asiatic Cholera ..	..	..	..	..	..	..	..	..	..
11 Cholera Nostras ..	1	..	1	..	..	..	..	..	2
12 Other Epidemic Diseases	78	55	40	16	13	3	1	..	206
13 Tuberculosis of the Respiratory System	686	520	210	165	159	74	7	..	1,821
14 Tuberculosis of the Men- inges ..	25	48	4	5	5	4	..	..	91
15 Other forms of Tuber- culosis ..	31	84	25	20	9	9	..	..	178
16 Cancer and other Malig- nant Tumours ..	1,084	837	365	262	193	98	4	..	2,843
17 Meningitis ..	95	64	33	18	18	14	..	1	243
18 Haemorrhage, Embolism, and Softening of Brain	420	323	139	123	60	49	..	..	1,114
19 Diseases of the Heart..	1,278	1,070	511	300	197	169	..	3	3,528
20 Acute Bronchitis ..	66	38	22	11	5	8	..	..	150
21 Chronic Bronchitis ..	173	130	62	46	22	10	..	..	443
22 Pneumonia ..	595	388	169	109	83	72	..	1	1,417
23 Other Diseases of the Respiratory System (Tuberculosis exceptd.)	524	569	251	132	123	54	..	1	1,654
24 Diseases of the Stomach (Cancer excepted) ..	102	77	42	32	9	9	..	..	271
25a Diarrhoea and Enteritis (children under 2 years of age) ..	454	254	154	61	69	12	..	..	1,004
25b Diarrhoea and Enteritis (2 years and over) ..	93	63	64	7	16	7	..	..	250
26 Appendicitis & Typhlitis	90	77	46	13	20	8	..	..	254
27 Hernia, Intestinal Ob- struction ..	109	76	48	17	17	12	1	..	280
28 Cirrhosis of the Liver..	79	60	33	24	14	5	1	..	216
29 Acute and Chronic Nephritis ..	688	496	232	132	72	40	1	..	1,661
30 Non-cancerous Tumours and other Diseases of Female Genital Organs	..	..	..	..	..	..	..	..	..
31 Puerperal Septicæmia (Puerperal Fever, Puerperal Peritonitis)	..	..	..	..	..	..	..	..	..
32 Other Puerperal Acci- dents of Pregnancy and Confinement ..	..	..	..	..	..	..	..	..	..
33 Congenital Debility and Malformations ..	894	607	288	163	109	106	1	1	2,169
34 Senility ..	916	583	321	211	127	79	10	..	2,247
35 Violent Deaths ..	893	579	370	180	175	87	2	2	2,288
36 Suicides ..	220	118	81	51	48	12	3	1	534
37 Other Diseases ..	1,829	1,321	734	419	338	176	3	1	4,821
38 Unspecified or Ill-defined Diseases ..	145	125	40	75	65	21	5	..	476
Total—Males ..	11,887	8,863	4,440	2,644	2,039	1,177	42	11	31,103

CAUSES OF DEATH.—FEMALES, 1924.

Cause.	N.S.W.	Vic.	Q'land.	S. Aus.	W. Aus.	Tas.	Nor. Ter.	Fed. Cap. Ter.	Aus- tralia.
1 Typhoid Fever ..	41	14	17	7	16	2	..	..	91
2 Typhus Fever ..	..	..	..	..	..	..	..	..	..
3 Malaria ..	1	..	7	..	2	..	..	..	10
4 Small-pox ..	..	..	..	..	..	..	..	..	..
5 Measles ..	16	4	20	..	16	..	..	..	56
6 Scarlet Fever ..	16	14	2	3	1	1	..	..	37
7 Whooping Cough ..	32	131	13	29	12	8	..	..	225
8 Diphtheria ..	119	44	23	15	8	6	..	..	215
9 Influenza—Pneumonic	54	64	21	10	7	3	..	..	159
9a Influenza—other ..	50	28	23	8	10	7	..	..	126
10 Asiatic Cholera ..	..	..	..	..	..	..	..	..	..
11 Cholera Nostras ..	..	..	..	..	..	..	..	..	..
12 Other Epidemic Diseases	49	39	23	14	5	4	..	..	134
13 Tuberculosis of the Respiratory System	452	413	96	167	62	54	1	..	1,245
14 Tuberculosis of the Men- inges ..	16	35	2	10	4	9	..	..	76
15 Other forms of Tuber- culosis ..	41	54	8	16	6	13	..	..	138
16 Cancer and other Malignant Tumours ..	988	824	288	249	132	100	..	..	2,581
17 Meningitis ..	67	44	28	12	7	14	..	..	172
18 Hæmorrhage, Embolism, and Softening of Brain	454	380	124	130	52	51	..	..	1,191
19 Diseases of the Heart ..	996	962	334	227	128	118	..	1	2,766
20 Acute Bronchitis ..	79	28	17	19	2	5	..	..	150
21 Chronic Bronchitis ..	123	140	45	27	20	10	..	..	365
22 Pneumonia ..	377	292	103	76	52	57	..	..	957
23 Other Diseases of the Respiratory System (Tuberculosis excepted.)	424	357	108	91	66	41	..	1	1,088
24 Diseases of the Stomach (Cancer excepted) ..	56	46	25	18	18	2	..	1	166
25a Diarrhœa and Enteritis (children under 2 years of age) ..	396	194	107	51	51	7	..	..	806
25b Diarrhœa and Enteritis (2 years and over) ..	82	67	53	18	8	8	..	..	236
26 Appendicitis & Typhlitis	56	48	25	11	8	6	..	..	154
27 Hernia, Intestinal Ob- struction ..	96	83	37	27	12	16	..	..	271
28 Cirrhosis of the Liver ..	26	29	8	8	10	3	..	..	84
29 Acute and Chronic Nephritis ..	425	431	181	108	56	31	..	..	1,232
30 Non-cancerous Tumours and other Diseases of Female Genital Organs	76	54	35	20	11	3	..	..	199
31 Puerperal Septicæmia (Puerperal Fever, Puerperal Peritonitis)	115	87	27	15	12	9	..	..	265
32 Other Puerperal Acci- dents of Pregnancy and Confinement ..	200	111	72	50	24	16	..	..	473
33 Congenital Debility and Malformations ..	689	498	201	141	90	71	..	..	1,690
34 Senility ..	650	657	209	211	81	101	..	..	1,909
35 Violent Deaths ..	252	184	107	50	31	28	..	1	653
36 Suicides ..	51	34	16	11	4	3	..	..	119
37 Other Diseases ..	1,361	1,169	466	336	182	125	..	..	3,579
38 Unspecified or Ill-defined Diseases ..	82	81	16	41	24	14	1	..	259
Total—Females ..	8,948	7,640	2,887	2,226	1,224	946	2	4	23,877

CAUSES OF DEATH.—PERSONS, 1924.

Cause.	N.S.W.	Vic.	Q'land.	S. Aus.	W. Aus.	Tas.	Nor. Ter.	Fed. Cap. Ter.	Aus- tralia.
1 Typhoid Fever ..	97	33	46	14	20	8	..	..	218
2 Typhus Fever ..	..	..	..	..	..	..	..	..	..
3 Malaria ..	3	3	18	..	3	..	3	..	30
4 Small-pox ..	..	..	..	..	..	..	..	..	..
5 Measles ..	36	7	33	..	39	4	..	..	119
6 Scarlet Fever ..	23	21	3	4	1	3	..	..	55
7 Whooping Cough ..	64	247	23	48	24	14	..	..	420
8 Diphtheria ..	211	113	51	28	14	20	..	..	437
9 Influenza—Pneumonic	109	118	62	17	26	9	..	..	341
9A Influenza—other ..	105	58	45	13	12	8	..	..	241
10 Asiatic Cholera ..	..	..	..	..	..	..	..	..	..
11 Cholera Nostras ..	1	..	1	..	..	..	..	..	2
12 Other Epidemic Diseases	127	94	63	30	18	7	1	..	340
13 Tuberculosis of the Respiratory System	1,138	933	306	332	221	128	8	..	3,066
14 Tuberculosis of the Men- inges ..	41	83	6	15	9	13	..	..	167
15 Other forms of Tuber- culosis ..	72	138	33	36	15	22	..	..	316
16 Cancer and other Malignant Tumours ..	2,072	1,661	653	511	325	198	4	..	5,424
17 Meningitis ..	162	108	61	30	25	28	..	1	415
18 Hemorrhage, Embolism, and Softening of Brain	874	703	263	253	112	100	..	..	2,305
19 Diseases of the Heart..	2,274	2,032	845	527	325	287	..	4	6,294
20 Acute Bronchitis ..	145	66	39	30	7	13	..	..	300
21 Chronic Bronchitis ..	296	270	107	73	42	20	..	..	808
22 Pneumonia ..	972	680	272	185	135	129	..	1	2,374
23 Other Diseases of the Respiratory System (Tuberculosis exceptd.)	948	926	359	223	189	95	..	2	2,742
24 Diseases of the Stomach (Cancer excepted) ..	158	123	67	50	27	11	..	1	437
25a Diarrhoea and Enteritis (children under 2 years of age) ..	850	448	261	112	120	19	..	..	1,810
25b Diarrhoea and Enteritis (2 years and over) ..	175	130	117	25	24	15	..	..	486
26 Appendicitis & Typhlitis	146	125	71	24	28	14	..	..	408
27 Hernia, Intestinal Ob- struction ..	205	159	85	44	29	28	1	..	551
28 Cirrhosis of the Liver..	165	89	41	32	24	8	1	..	300
29 Acute and Chronic Nephritis ..	1,113	927	413	240	128	71	1	..	2,893
30 Non-cancerous Tumours and other Diseases of Female Genital Organs	76	54	35	20	11	3	..	..	199
31 Puerperal Septicæmia (Puerperal Fever, Puerperal Peritonitis)	115	87	27	15	12	9	..	..	265
32 Other Puerperal Acci- dents of Pregnancy and Confinement ..	200	111	72	50	24	16	..	..	473
33 Congenital Debility and Malformations ..	1,583	1,105	489	304	199	177	1	1	3,859
34 Senility ..	1,566	1,240	530	422	208	180	10	..	4,156
35 Violent Deaths ..	1,145	763	477	230	206	115	2	3	2,941
36 Suicides ..	271	152	97	62	52	15	3	1	653
37 Other Diseases ..	3,130	2,490	1,200	755	520	301	3	1	8,400
38 Unspecified or Ill-defined Diseases ..	227	206	56	116	89	35	6	..	735
Total—Persons ..	20,835	16,503	7,327	4,870	3,263	2,123	44	15	54,980

The classification for the years 1920 to 1924 is shown for Australia in the following table, and for purposes of comparison the figures for the year 1924 have been repeated from the preceding table. Male and female deaths for 1920 are shown on pages 129 and 130 of the fourteenth issue, for 1921 on pages 122 and 123 of the fifteenth issue, for 1922 on pages 1001 and 1002 of the sixteenth issue, and for 1923 on pages 1006 and 1007 of the seventeenth issue of this book.

CAUSES OF DEATH.—AUSTRALIA, 1920 TO 1924.

PERSONS.

Cause.	1920.	1921.	1922.	1923.	1924.
1 Typhoid Fever	312	352	227	242	218
2 Typhus Fever .. .. .	..	..	..	1	..
3 Malaria	19	43	21	21	30
4 Small-pox .. .. .	..	2	..	..	..
5 Measles	482	83	28	222	119
6 Scarlet Fever	90	42	38	45	55
7 Whooping Cough	561	428	182	119	420
8 Diphtheria	829	917	543	395	437
9 Influenza—Pneumonic	218	346	162	769	341
9A Influenza—Other	230	308	193	441	241
10 Asiatic Cholera .. .. .	..	..	..	..	..
11 Cholera Nostras	1	2	1	3	2
12 Other Epidemic Diseases	208	295	302	341	340
13 Tuberculosis of the Respiratory System	a 3,098	a 3,205	a 2,954	3,102	3,066
14 Tuberculosis of the Meninges	214	218	176	159	167
15 Other forms of Tuberculosis	295	284	267	283	316
16 Cancer and other Malignant Tumours	4,511	4,768	5,052	5,073	5,424
17 Meningitis	512	495	460	438	415
18 Hæmorrhage Embolism, and Softening of the Brain	2,495	2,472	2,833	2,989	2,305
19 Diseases of the Heart	6,059	5,897	6,013	5,898	6,294
20 Acute Bronchitis	398	386	283	351	300
21 Chronic Bronchitis	962	816	796	892	808
22 Pneumonia	2,099	2,066	2,151	2,726	2,374
23 Other Diseases of the Respiratory System (Tuberculosis excepted)	2,527	2,304	2,208	2,901	2,742
24 Diseases of the Stomach (Cancer excepted)	443	439	467	444	437
25A Diarrhœa and Enteritis (Children under two years only)	3,067	2,589	1,743	2,338	1,810
25B Diarrhœa and Enteritis (2 years and over)	1,140	985	607	624	486
26 Appendicitis and Typhlitis	382	351	402	436	408
27 Hernia, Intestinal Obstruction	541	480	545	508	551
28 Cirrhosis of the Liver	340	323	323	273	300
29 Acute and Chronic Nephritis	2,286	2,139	2,333	2,460	2,893
30 Non-cancerous Tumours and other Diseases of the Female Genital Organs	154	166	169	174	199
31 Puerperal Septicæmia (Puerperal Fever, Peritonitis)	250	208	196	233	265
32 Other Puerperal Accidents of Pregnancy and Confinement	433	435	425	458	473
33 Congenital Debility and Malformations	4,046	3,758	3,521	4,025	3,859
34 Senility	4,636	3,981	4,044	4,655	4,156
35 Violent Deaths	2,791	2,892	2,590	2,674	2,941
36 Suicides	636	621	533	599	653
37 Other Diseases	8,219	8,279	7,556	8,203	8,400
38 Unspecified or Ill-defined Diseases	805	721	665	691	735
Total	56,289	54,076	51,311	56,236	54,980

(a) Includes acute disseminated tuberculosis.

NOTE.—In consequence of changes made in the classification of the causes of death the figures given in the table above are not on identical lines throughout the period covered.

15 Deaths from Special Causes.—The above table furnishes particulars for the last five years only, and comparisons will, therefore, generally be restricted to that period.

(i) *Typhoid Fever.* The number of deaths from typhoid fever in 1924 was 218, which was equivalent to 4 per hundred thousand living. This rate is much lower than the average for the last five years. Of the 218 who died, 127 were males and 91 females.

(ii) *Typhus*. Only one death from typhus, which occurred in South Australia in 1923, has been recorded in Australia.

(iii) *Malaria*. Deaths from malarial diseases are mainly confined to the tropical districts of Northern Queensland and Western Australia, and to the Northern Territory; 18 out of the 30 deaths registered in 1924 occurred in Queensland, 3 in New South Wales, 3 in Victoria, 3 in Western Australia, and 3 in the Northern Territory.

(iv) *Small-pox*. The number of deaths from small-pox in Australia is very small. During the five years under review there were only four deaths from this cause.

(v) *Measles*. Of the deaths from measles the greatest number occurred during 1920, when 482 were registered, while the minimum was in 1922 with a total of 28 deaths. During 1924 there were 119 deaths, of which 63 were males and 56 females; of these, 36 were registered in New South Wales, 7 in Victoria, 33 in Queensland, 39 in Western Australia, and 4 in Tasmania.

(vi) *Scarlet Fever*. The mortality from this source is very light, the average number of deaths from 1920 to 1924 being 54 per annum.

(vii) *Whooping Cough*. In 1924 there were 420 deaths, equal to a death rate of 7 per 100,000 persons. Of the 420 deaths, 195 were males and 225 females. Sixty-four deaths occurred in New South Wales, 247 in Victoria, 23 in Queensland, 48 in South Australia, 24 in Western Australia, and 14 in Tasmania. The greatest number of deaths from whooping cough in any year of the period 1920-1924 was 561 in 1920.

(viii) *Diphtheria*. The number of deaths due to diphtheria has varied from a minimum of 395 in 1923 to a maximum of 917 in 1921. During 1924 there were 437 deaths from this cause—222 males and 215 females—representing a death rate of 8 per 100,000 persons living. The corresponding rates for the separate States were—Victoria, Queensland, and Western Australia, 5; South Australia, 9; New South Wales, 10; and Tasmania, 14.

(ix) *Influenza*. The deaths from influenza during 1924 were less than in 1923, when they were more numerous than in any year since the extraordinary epidemic of 1919. In 1924, there were 582 deaths from this disease, representing a rate of 10 per 100,000 persons. Of these deaths, 241 were ascribed to ordinary influenza, and 341 to pneumonic influenza.

(x) *Asiatic Cholera*. No deaths from Asiatic cholera have been recorded in Australia.

(xi) *Cholera Nostras*. For the five years under review only nine deaths have been due to this cause.

(xii) *Other Epidemic Diseases*. The deaths registered under this heading numbered 340 in 1924. The list in 1924 includes the following diseases:—Dysentery 92, meningococcal meningitis 89, erysipelas 75, lethargic encephalitis 45, acute poliomyelitis 26, leprosy 6, and other epidemic diseases 4. There were no deaths from plague in the years 1920 and 1924. Outbreaks occurred in 1921 and 1922, causing 61 deaths in Queensland and 10 in New South Wales, and 1 death occurred in 1923 in New South Wales.

(xiii) *Tuberculosis of the Respiratory System*. Of the various forms of tuberculosis prevalent in Australia, phthisis, or tuberculosis of the lungs, has attracted the most attention. The intimate relation, however, between tuberculosis of the lungs and of other parts of the respiratory system renders it desirable that all forms of tuberculosis of the respiratory system should be brought under one head for investigations concerning the age incidence and duration of this disease.

During 1924 there were 3,066 deaths from tuberculosis of the respiratory system, which compares favourably with the average of 3,091 for the preceding four years. The 3,066 deaths in 1924 represented a rate of 53 per 100,000 persons. Of these deaths, 1,821 were males and 1,245 females.

(xiv) *Tuberculosis of the Meninges*. The number of deaths ascribed to this cause in 1924 was 167. During the last five years the greatest number, viz., 218, occurred in 1921, and the least number, viz., 159, in 1923.

(xv) *Other Forms of Tuberculosis.* The deaths in 1924 include the following:—Tuberculosis of the intestines and peritoneum, 77; tuberculosis of the spinal column, 52; tuberculosis of the joints, 27; tuberculosis of other organs, 42; acute disseminated tuberculosis, 69; and chronic disseminated tuberculosis, 49.

(xva) *All Forms of Tuberculosis.*—(a) *General.* A complete tabulation of all the different tubercular diseases from which deaths occurred in 1924 will be found in Bulletin No. 42 of "Australian Demography." The total number of deaths due to tubercular diseases was 3,549, viz., 2,090 males and 1,459 females.

(b) *Ages at Death.* The following table shows the ages of these 3,549 persons:—

TUBERCULAR DISEASES.—DEATHS IN AGE-GROUPS, AUSTRALIA, 1924.

Ages.	Male.	Female.	Total.	Ages.	Male.	Female.	Total.
Under 5 years ..	85	51	136	55 years and under 60	187	66	253
5 years and under 10	13	21	34	60 " " 65	132	46	178
10 " " 15	13	32	45	65 " " 70	80	25	105
15 " " 20	66	137	203	70 " " 75	37	22	59
20 " " 25	169	206	375	75 " " 80	17	10	27
25 " " 30	191	215	406	80 .. over ..	4	5	9
30 " " 35	211	198	409	Unspecified ..	1	..	1
35 " " 40	232	152	384				
40 " " 45	231	110	341				
45 " " 50	213	76	289				
50 " " 55	203	87	295	Total ..	2,090	1,459	3,549

(c) *Occupations at Death, Males.* A tabulation of the occupations of males dying from tubercular diseases during 1924 is given in summary form hereunder:—

OCCUPATIONS OF MALES WHO DIED FROM TUBERCULAR DISEASES.—AUSTRALIA, 1924.

Occupation.	No. of Male Deaths.	Occupation.	No. of Male Deaths.
PROFESSIONAL CLASS—		INDUSTRIAL CLASS—	
Government, Defence, Law ..	40	Art and Mechanic Productions	102
Others	73	Textiles and Fibrous Materials	54
DOMESTIC CLASS—		Food and Drinks ..	20
Board and Lodging	31	Animal and Vegetable Sub-	
Others	31	stances	9
COMMERCIAL CLASS—		Metals and Minerals ..	40
Property and Finance ..	16	Fuel, Light and Energy ..	13
Art, Mechanic and Textile Pro-		Building and Construction ..	91
ducts	21	Others	469
Food and Drinks	41	AGRICULTURAL, ^oPASTORAL,	
Animal and Vegetable Sub-		MINING, ETC., CLASS—	
stances	4	Agricultural	144
Fuel, Light and Metals ..	6	Pastoral	43
Merchants and Dealers ..	50	Mining and Quarrying ..	159
Others	170	Others	17
TRANSPORT AND COMMUNICATION		INDEPENDENT MEANS ..	36
CLASS—		DEPENDENTS	161
Railway Traffic	49	OCCUPATION NOT STATED ..	47
Road and Tramway Traffic ..	70		
Sea and River Traffic ..	58	TOTAL MALE DEATHS ..	2,090
Others	25		

(d) *Length of Residence in Australia.* The length of residence in Australia of persons who died from tubercular diseases in 1924 is given in the next table.

**LENGTH OF RESIDENCE IN AUSTRALIA OF PERSONS WHO DIED FROM
TUBERCULAR DISEASES, 1924.**

Length of Residence in Australia.	Male.	Fem.	Total.	Length of Residence in Australia.	Male.	Fem.	Total.
Born in Australia ..	1,504	1,244	2,748	Resident 10 years & under 15 ..	102	53	155
Resident under 1 year ..	17	1	18	" 15 " 20 ..	42	8	50
" 1 year ..	13	7	20	" 20 " over ..	232	88	340
" 2 years ..	19	10	29	Length of residence not stated ..	97	18	115
" 3 " ..	7	13	17				
" 4 " ..	10	11	21				
" 5 " and under 10 ..	27	9	36	Total Deaths ..	2,030	1,459	3,549

(e) *Death Rates.* The preceding table and the table on page 989 show that, among persons who had lived less than five years in Australia, 702 deaths occurred, and of these 105, or 14.9 per cent., were due to tubercular diseases.

In order to show the prevalence of tuberculosis in the several States, the death rates from tubercular diseases are given in the following table, together with the proportion which deaths from tuberculosis bear to 10,000 deaths from all causes:—

TUBERCULOSIS (ALL FORMS).—DEATH RATES (a) AND PROPORTION OF TOTAL DEATHS, 1924.

State.	Death Rates (a) from Tuberculosis.			Proportion per 10,000 Deaths.		
	Males.	Females.	Total.	Males.	Females.	Total.
New South Wales ..	65	47	56	624	569	600
Victoria ..	81	61	70	736	657	699
Queensland ..	55	27	42	538	367	471
South Australia ..	71	74	72	719	867	786
Western Australia ..	90	43	68	849	588	751
Tasmania ..	81	71	76	739	803	768
Northern Territory ..	275	95	222	1,667	5,000	1,818
Australia ..	71	51	61	672	611	646

(a) Number of deaths from tuberculosis per 100,000 of mean population.

(f) *Death Rates, Various Countries.* The following table, which gives for a number of countries the death rates from tuberculosis of the respiratory system, and all forms of tuberculosis, per 100,000 persons living, shows that Australia occupies a very favourable position in comparison with other countries:—

TUBERCULOSIS.—DEATHS PER 100,000 PERSONS LIVING, VARIOUS COUNTRIES.

Country.	Year.	Respiratory System.	All Forms.	Country.	Year.	Respiratory System.	All Forms.
Rumania ..	1914	40	(a)	Scotland ..	1923	82	118
Union of South Africa (Whites) ..	1923	35	41	Irish Free State ..	1923	111	141
New Zealand ..	1924	44	57	Prussia ..	1922	(a)	143
Ontario (Canada) ..	1924	50	60	Italy ..	1923	110	143
Australia ..	1924	53	61	Jamaica ..	1915	(a)	147
Canada (exclusive of Quebec) ..	1924	55	68	Germany ..	1920	132	154
Ceylon ..	1923	72	81	Spain ..	1921	(a)	158
Denmark ..	1922	77	84	Northern Ireland ..	1923	120	159
United States (Registration Area) ..	1923	82	94	Sweden ..	1920	131	163
Netherlands ..	1923	79	105	Switzerland ..	1920	131	180
England and Wales ..	1923	84	106	Norway ..	1921	157	198
Great Britain ..	1923	84	109	Japan ..	1923	139	202
Belgium ..	1922	87	111	Finland ..	1920	(a)	207
Quebec (Canada) ..	1922	106	116	France ..	1917	(a)	215
				Austria ..	1921	(a)	227
				Chile ..	1914	(a)	255
				Hungary ..	1915	(a)	354

(a) Not available.

(xvi) *Cancer and other Malignant Tumours.*—(a) *General.* The number of deaths from cancer has increased continuously to 5,424 in 1924. Of the deaths registered in 1924, 2,843 were of males, viz., 1,084 in New South Wales, 837 in Victoria, 365 in Queensland, 262 in South Australia, 193 in Western Australia, 98 in Tasmania, and 4 in the Northern Territory; while 2,581 were of females, viz., 988 in New South Wales, 824 in Victoria, 288 in Queensland, 249 in South Australia, 132 in Western Australia, and 100 in Tasmania. Bulletin No. 42 of "Australian Demography" contains a complete tabulation of the various types of cancer and of the seat of the disease.

(b) *Type and Seat of Disease.* Tables showing the type and seat of disease, in conjunction with age, and also with conjugal condition, of the persons dying from cancer in 1924 will be found in Bulletin No. 42 of "Australian Demography." A summary showing type and seat of disease for the year 1924 is given hereunder:—

DEATHS FROM CANCER.—TYPE AND SEAT OF DISEASE, AUSTRALIA, 1924.

Type of Disease.	Males.	Females	Persons	Seat of Disease.	Males.	Females	Persons
Carcinoma ..	1,590	1,566	3,156	Stomach and liver..	1,205	722	1,927
Cancer ..	575	455	1,030	Peritoneum, intestines and rectum	428	382	810
Malignant disease ..	266	252	518	Female genital organs ..	..	540	540
Sarcoma ..	168	135	303	Breast ..	..	415	415
Epithelioma ..	127	52	179	Buccal cavity ..	321	33	354
Rodent ulcer ..	43	25	68	Skin ..	118	76	194
Malignant tumour..	47	60	107	Other organs ..	771	413	1,184
Neoplasm ..	20	14	34				
Scirrhus ..	1	17	18				
Hypernephroma ..	6	5	11				
Total Deaths ..	2,843	2,581	5,424	Total Deaths ..	2,843	2,581	5,424

(c) *Ages at Death.* The ages of the 5,424 persons who died from cancer in 1924 are given in the following table, which shows that while the ages below 35 are not by any means immune from the disease, the great majority of deaths occurred at ages from 35 upwards, the maximum being found in the age-group 60 to 65:—

DEATHS FROM CANCER.—AGES, AUSTRALIA, 1924.

Ages.	Male.	Female.	Total.	Ages.	Male.	Female.	Total.
Under 15 years ..	24	14	38	60 years and under 65	529	381	910
15 years and under 20	8	10	18	65 " " 70	489	336	825
20 " " 25	11	6	17	70 " " 75	403	282	685
25 " " 30	8	19	27	75 " " 80	265	227	492
30 " " 35	27	42	69	80 " " 85	123	117	240
35 " " 40	47	94	141	85 years and over	53	74	127
40 " " 45	92	152	244	Unspecified ..	..	..	..
45 " " 50	162	215	377				
50 " " 55	245	281	526				
55 " " 60	357	331	688	Total Deaths ..	2,843	2,581	5,424

(d) *Occupations.* A summarized tabulation of the occupation of males who died from cancer is given hereunder :—

DEATHS FROM CANCER.—OCCUPATIONS (MALES), AUSTRALIA, 1924.

Occupation.	No. of Male Deaths.	Occupation.	No. of Male Deaths.
PROFESSIONAL CLASS—		INDUSTRIAL CLASS—	
Government, Defence, Law ..	62	Art and Mechanic Productions ..	117
Others	98	Textiles and Fibrous Materials ..	64
DOMESTIC CLASS—		Food and Drinks	33
Board and Lodging	46	Animal and Vegetable Substances	11
Others	25	Metals and Mineral	62
COMMERCIAL CLASS—		Fuel, Light and Energy	4
Property and Finance	27	Building and Construction	165
Art, Mechanic and Textile Products	25	Others	680
Food and Drinks	68	AGRICULTURAL, PASTORAL, MINING, ETC., CLASS—	
Animal and Vegetable Substances	7	Agricultural	448
Fuel, Light and Metals	4	Pastoral	109
Merchants and Dealers	71	Mining and Quarrying	128
Others	146	Others	30
TRANSPORT AND COMMUNICATION CLASS—		INDEPENDENT MEANS	64
Railway Traffic	79	DEPENDENT	43
Road and Tramway Traffic	90	OCCUPATION UNSPECIFIED	74
Sea and River Traffic	50	TOTAL MALE DEATHS	2,843
Others	13		

(e) *Death Rates.* The following table shows that the death rate for males is higher than that for females in every State with the exception of Tasmania :—

DEATHS FROM CANCER.—RATES (a) AND PROPORTIONS, 1924.

State.	Death Rates (a) from Cancer.			Proportion of 10,000 Total Deaths.		
	Males.	Females.	Total.	Males.	Females.	Total.
New South Wales	95	90	93	912	1,104	995
Victoria	103	100	101	944	1,079	1,007
Queensland	84	74	79	822	998	891
South Australia	98	95	97	991	1,119	1,049
Western Australia	100	79	90	947	1,078	996
Tasmania	91	93	92	833	1,057	933
Northern Territory	157	..	111	952	..	909
Australia	96	91	93	914	1,081	987

(a) Number of deaths from cancer per 100,000 of mean population.

(f) *Comparison with Tuberculosis.* In recent years the death rate from tuberculosis has shown a tendency to decrease, while that for cancer has displayed an almost continuous increase. The table hereunder shows that for each of the years under review, the death rate for cancer has been greater than that for tuberculosis, the excess varying from 17 per 100,000 persons in 1920 to 32 in 1924. During the whole period the mortality of both sexes from cancer was always greater than that from tuberculosis.

TUBERCULOSIS AND CANCER.—DEATH RATES (a), AUSTRALIA, 1920 TO 1924.

Year.	Death Rate (a) from Tuberculosis.			Death Rate (a) from Cancer.		
	Males.	Females.	Total.	Males.	Females.	Total.
1920	79	55	67	86	82	84
1921	78	56	68	88	87	87
1922	71	51	61	93	88	91
1923	71	53	62	91	88	89
1924	71	51	61	96	91	93

(a) Number of deaths per 100,000 of mean population.

(g) *Deaths, Various Countries.* The following table shows the Australian death rate from cancer in comparison with that for other countries:—

CANCER.—DEATHS PER 100,000 PERSONS LIVING, VARIOUS COUNTRIES.

Country.	Year.	Rate.	Country.	Year.	Rate.
Ceylon	1923	9	United States (Regis- tration Area) ..	1923	89
Rumania	1914	13	Prussia	1922	97
Serbia	1911	14	Australia	1924	93
Jamaica	1915	17	Germany	1920	95
Chile	1914	36	New Zealand ..	1924	96
Hungary	1915	48	Ontario, (Canada) ..	1924	97
Quebec (Canada) ..	1922	56	Norway	1921	105
Spain	1921	60	Northern Ireland ..	1923	107
Italy	1923	71	Sweden	1920	110
Japan	1923	70	Netherlands ..	1923	113
Union of South Africa (Whites)	1923	71	Switzerland ..	1920	126
France	1917	75	Great Britain ..	1923	127
Belgium	1922	78	England and Wales	1923	127
Canada (exclusive of Quebec)	1924	82	Austria	1921	128
Irish Free State ..	1923	86	Scotland	1923	130
			Denmark	1922	141

The fifth issue of this Year Book contains on pages 230, *et seq.*, a paper dealing, *inter alia*, with the incidence of cancer in Australia.

(xvii) *Meningitis.* The deaths during 1924 from meningitis numbered 415, of which 162 occurred in New South Wales, 108 in Victoria, 61 in Queensland, 30 in South Australia, 25 in Western Australia, 28 in Tasmania, and 1 in the Federal Capital Territory.

(xviii) *Cerebral Hæmorrhage, Embolism and Softening of the Brain.* The deaths under this heading have been remarkably uniform in number during the period under review. The figures for 1924 are made up as follows:—Cerebral hæmorrhage and apoplexy, 928 males and 974 females; cerebral embolism, 147 males, 181 females; softening of the brain, 39 males and 36 females. Prior to 1924 deaths arising from cerebral hæmorrhage combined with arterio-sclerosis were included under this heading. They are now included, in the abridged list, under No. 37 "Other Diseases."

(xix) *Diseases of the Heart.* The number of deaths in 1924 was 6,294, viz., 3,528 males and 2,766 females; of the 6,294 deaths 77 were attributed to pericarditis, 725 to endocarditis and acute myocarditis, 310 to angina pectoris, and 5,182 to other diseases of the heart. Of these deaths, New South Wales contributed 1,278 males and 996 females; Victoria, 1,070 males and 962 females; Queensland, 511 males and 334 females; South Australia, 300 males and 227 females; Western Australia, 197 males and 128 females; Tasmania, 169 males and 118 females; and Federal Capital Territory, 3 males and 1 female. The death rates and proportions per 10,000 deaths in 1924 were as follows:—

**DEATH RATES (a) FROM DISEASES OF THE HEART AND PROPORTION OF
10,000 TOTAL DEATHS, AUSTRALIA, 1924.**

State.	Death Rates (a) from Diseases of the Heart.			Proportion of 10,000 Deaths.		
	Males.	Females.	Total.	Males.	Females.	Total.
New South Wales	113	91	102	1,075	1,113	1,091
Victoria	131	116	124	1,207	1,259	1,231
Queensland	117	86	102	1,151	1,157	1,153
South Australia	112	87	100	1,135	1,020	1,082
Western Australia	102	77	90	966	1,046	996
Tasmania	157	110	134	1,436	1,247	1,353
Federal Capital Territory ..	121	73	104	2,727	2,500	2,666
 Australia	 119	 97	 108	 1,134	 1,158	 1,145

(a) Number of deaths from Diseases of the Heart per 100,000 of mean population.

(xx) *Acute Bronchitis.* Deaths from bronchitis are classified under the following headings:—(a) Acute, (b) chronic, (c) unspecified, under five years of age, and (d) unspecified, five years and over. For the purpose of the abridged classification, (a) and (c) are treated as "acute," and (b) and (d) as "chronic" bronchitis. Acute bronchitis caused 398 deaths in 1920, 386 in 1921, 283 in 1922, 351 in 1923, and 300 in 1924, viz., 150 males and 150 females.

(xxi) *Chronic Bronchitis.* The deaths from this cause in 1924 numbered 808, viz., 443 males and 365 females.

(xxii) *Pneumonia.* The deaths from pneumonia during 1924 were 2,374—1,417 males and 957 females—which is slightly above the average for the previous four years.

(xxiii) *Other Diseases of the Respiratory System.* Deaths under this heading in 1920 numbered 2,527; in 1921, 2,304; in 1922, 2,208; in 1923, 2,901; and in 1924, 2,742. The total for 1924 is made up as follows, viz.:—Diseases of the nasal fossae, 6; diseases of the larynx, 60; broncho-pneumonia, 1,436; capillary bronchitis, 22; pleurisy, 236; pulmonary congestion and apoplexy, 288; gangrene of the lungs, 26; asthma, 275; pulmonary emphysema, 34; chronic interstitial pneumonia, 341; other diseases of the respiratory system (tuberculosis excepted), 18.

(xxiv) *Diseases of the Stomach (Cancer excepted).* In 1924 this heading includes ulcer of the stomach, 115 males, 67 females; ulcer of the duodenum, 61 males, 18 females; and other diseases of the stomach (cancer excepted), 95 males, 91 females; a total of 437.

(xxva) *Diarrhœa and Enteritis (Children under two years only)*. The number of deaths due to these causes is always a large one, varying from 1,743 in 1922 to a maximum of 3,067 in 1920. The total for 1924 was 1,810. During 1924, 9,114 children died before reaching their second birthday, and of these, 1,810, or 19.9 per cent., died from diarrhœa and enteritis. The age distribution of children dying from these diseases during the first year of life will be found on page 1020.

The number of deaths (under 2 years of age), the death rates, and proportions of 10,000 deaths due to diarrhœa and enteritis are given below :—

DEATHS, DEATH RATES (a), ETC., DIARRHŒA AND ENTERITIS (UNDER 2 YEARS OF AGE).—AUSTRALIA, 1924.

State.	Number of Deaths from Infantile Diarrhœa and Enteritis.			Death Rates (a) from Infantile Diarrhœa and Enteritis.			Proportions of 10,000 Deaths.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
New South Wales	454	396	850	40	36	38	382	443	408
Victoria ..	254	194	448	31	24	27	287	254	272
Queensland ..	154	107	261	35	28	32	347	371	356
South Australia ..	61	51	112	23	20	21	231	229	230
Western Australia	69	51	120	36	31	33	338	417	368
Tasmania ..	12	7	19	11	7	9	102	74	90
Australia ..	1,004	806	1,810	34	28	31	323	338	329

(a) Number of deaths from these diseases per 100,000 of mean population.

(xxvb) *Diarrhœa and Enteritis (2 years and over)*. As in the case of Infantile Diarrhœa, the number of deaths from the same causes in older ages shows a very material decline, having fallen from 1,140 in 1920 to 486 in 1924.

(xxvi) *Appendicitis and Typhlitis*. Deaths under this heading numbered 382 in 1920, 351 in 1921, 402 in 1922, 436 in 1923, and 408 in 1924; the total for the last year included 254 males and 154 females.

(xxvii) *Hernia, Intestinal Obstruction*. The deaths under this heading have not varied greatly from year to year, the number registered in 1924 being 551, viz., hernia 115, and intestinal obstruction, 436.

(xxviii) *Cirrhosis of the Liver*. The deaths from this cause during 1924 numbered 300, while the average for the previous four years was 315.

(xxix) *Acute and Chronic Nephritis*. The number of deaths attributable to these diseases shows a considerable increase. In 1920 there were 2,286; in 1921, 2,139; in 1922, 2,333; in 1923, 2,460; and in 1924, 2,893; viz., 1,661 males and 1,232 females. Of the deaths registered in 1924, 186 were ascribed to acute nephritis, and 2,707 to chronic nephritis. New South Wales was responsible for 1,113 deaths; Victoria for 927; Queensland for 413; South Australia for 240; Western Australia for 128; Tasmania for 71; and Northern Territory 1.

(xxx) *Non-Cancerous Tumours and other Diseases of the Female Genital Organs*. Deaths in 1920 numbered 154; in 1921, 166; in 1922, 169; in 1923, 174; and in 1924, 199. Included in the 199 deaths in 1924 were the following :—Cysts, etc., of the ovary, 35; salpingitis and pelvic abscess, 65; benign tumours of the uterus, 57; uterine hæmorrhage (non-puerperal), 5; other diseases of the female genital organs, 37.

(xxxi) *Puerperal Septicæmia (Puerperal Fever)*. The number of deaths from puerperal septicæmia during 1924 was greater than in any of the previous four years, being 256 or 1.96 to every 1,000 live births. The corresponding rates during the preceding four years were :—1920, 1.83; 1921, 1.53; 1922, 1.43; and 1923, 1.72. A statement is appended which shows the death rate per 1,000 live births from puerperal causes in various countries, and the comparisons indicate that in this connexion Australia does not hold a favourable position.

CHILDBIRTH—DEATHS PER 1,000 LIVE BIRTHS, VARIOUS COUNTRIES.

Country.	Year.	Rates per 1,000 Live Births from—		
		Puerperal Sepsis.	Other Puerperal Causes.	All Puerperal Causes.
Netherlands	1923	0.62	1.71	2.33
Sweden	1920	1.29	1.34	2.63
Italy	1923	1.06	1.63	2.69
Japan	1923	1.31	2.06	3.37
England and Wales	1923	1.30	2.52	3.82
Great Britain	1923	1.44	2.89	4.33
Western Australia	1924	1.45	2.89	4.34
Union of South Africa (whites)	1923	2.16	2.37	4.53
Tasmania	1924	1.67	2.97	4.64
Irish Free State	1923	2.19	2.62	4.81
Northern Ireland	1923	1.63	3.29	4.92
New Zealand	1924	1.86	3.14	5.00
Queensland	1924	1.37	3.65	5.02
Belgium	1922	2.14	3.25	5.39
Australia	1924	1.96	3.51	5.47
Victoria	1924	2.41	3.07	5.48
South Australia	1924	1.29	4.32	5.61
New South Wales	1924	2.14	3.72	5.86
Ontario (Canada)	1924	1.67	4.20	5.87
Canada (excluding Quebec) ..	1924	1.72	4.31	6.03
Scotland	1923	1.95	4.47	6.42
United States	1923	2.50	4.10	6.60
Ceylon	1923	8.64	12.92	21.56

(xxxii) *Other Puerperal Accidents of Pregnancy and Confinement.* The deaths under this heading in 1920 numbered 433; in 1921, 435; in 1922, 425; in 1923, 458; and in 1924, 473. Included in the 473 deaths in 1924 were the following:—Accidents of pregnancy, 96; puerperal hæmorrhage, 65; other accidents of childbirth, 97; puerperal albuminuria and convulsions, 153; puerperal phlegmasia alba dolens, embolus, sudden death, 54; death following childbirth, 6; diseases of the breast, 2.

(xxxia) *All Puerperal Causes.* The 738 deaths in 1924 under the two preceding headings correspond to a death rate of 26 per 100,000 females. It may be expressed in other terms by stating that 1 out of every 181 women confined in 1924 died from puerperal causes. The corresponding ratios for married women were 1 out of every 187, and for single women 1 out of every 107. More detailed information will be found in a series of tables in Bulletin No. 42, "Australian Demography."

The ages of the mothers who died varied from 14 to 47 years as shown in the following table:—

DEATHS FROM PUERPERAL CAUSES.—AGES OF MOTHERS, AUSTRALIA, 1924.

Age at Death.	Married Women.	Single Women.	Total.	Age at Death.	Married Women.	Single Women.	Total.
14 years ..	..	1	1	33 years ..	44	..	44
16 " ..	2	3	5	34 " ..	42	1	43
17 " ..	3	2	5	35 " ..	24	..	24
18 " ..	5	2	7	36 " ..	25	..	25
19 " ..	8	3	11	37 " ..	28	2	30
20 " ..	9	4	13	38 " ..	28	..	28
21 " ..	24	11	35	39 " ..	24	1	25
22 " ..	21	3	24	40 " ..	24	1	25
23 " ..	27	5	32	41 " ..	16	..	16
24 " ..	31	2	33	42 " ..	11	..	11
25 " ..	21	3	24	43 " ..	10	..	10
26 " ..	37	..	37	44 " ..	6	..	6
27 " ..	32	3	35	45 " ..	2	..	2
28 " ..	30	4	34	46 " ..	3	..	3
29 " ..	36	1	37	47 " ..	1	..	1
30 " ..	35	2	37				
31 " ..	38	..	38				
32 " ..	33	4	37	Total Deaths	680	58	738

The total number of children left by the married mothers was 1,799, an average of 2.6 children per mother.

Forty-two of the mothers who died had been married less than one year, 94 between one and two years, and 53 between two and three years. The duration of marriage ranged up to 29 years, apart from 11 cases in which the date of marriage was not stated. A tabulation, distinguishing the ages at marriage, will be found in Bulletin No. 42, "Australian Demography," which also gives a table showing in combination the duration of marriage and previous issue.

(xxxiii) *Congenital Debility, Premature Birth, and Malformations.* The deaths under this heading in 1924 numbered 3,859, of which 3,792 were of children under one year of age. Over 49 per cent. of the deaths of children under one year of age were due to these causes. Returns for 1924 are given in the following table:—

DEATHS FROM CONGENITAL DEBILITY, ETC., AND MALFORMATIONS, 1924.

State or Territory.	Congenital Malformations.			Congenital Debility, Icterus, Sclerema.			Premature Birth, and Injury at Birth.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
New South Wales	148	105	253	202	156	358	544	428	972
Victoria ..	94	77	171	138	94	232	375	327	702
Queensland ..	48	38	86	60	40	100	180	123	303
South Australia	34	30	64	40	24	64	89	87	176
Western Australia	16	11	27	17	19	36	76	60	136
Tasmania ..	19	14	33	30	17	47	57	40	97
North'n Territory	..	..	..	..	..	..	1	..	1
Fed.Cap.Territory	..	..	..	1	..	1	..	..	..
Australia ..	359	275	634	488	350	838	1,322	1,065	2,387
Number of deaths under one year per 1,000 births	4.68	3.70	4.20	7.09	5.29	6.21	19.21	16.11	17.69

(xxxiv) *Senility.* The deaths ascribed to "old age" form a large group, and are in excess of those due to infantile debility. In 1924, 4,156 deaths were attributed to this cause, as follows: 1,566 occurred in New South Wales, viz., 916 males and 650 females; 1,240 in Victoria, viz., 583 males and 657 females; 530 in Queensland, viz., 321 males and 209 females; 422 in South Australia, viz., 211 males and 211 females; 208 in Western Australia, viz., 127 males and 81 females; 180 in Tasmania, viz., 79 males and 101 females; and 10 males in the Northern Territory.

Of the males whose deaths were described as due to senility, five were stated to be over 100, and of the females, fourteen were 100 or over.

(xxxv) *Violent Deaths.* A very large number of deaths is due every year to external violence, and, as may be expected, male deaths largely predominate. The figures quoted are exclusive of suicides, which have been treated in a separate group. Deaths ascribed to violence numbered in 1920, 2,791, viz., 2,159 males and 632

females; in 1921, 2,892, viz., 2,301 males and 591 females; in 1922, 2,590, viz., 2,016 males and 574 females; in 1923, 2,674, viz., 2,080 males and 594 females; and in 1924, 2,941, viz., 2,238 males and 653 females. Of the deaths in 1924, 893 males and 252 females died in New South Wales; 579 males and 184 females in Victoria; 370 males and 107 females in Queensland; 180 males and 50 females in South Australia; 175 males and 31 females in Western Australia; 87 males and 23 females in Tasmania; 2 males in the Northern Territory; and 2 males and 1 female in the Federal Capital Territory.

The following table shows the various kinds of violent deaths which occurred in 1924, distinguishing males and females:—

DEATHS FROM EXTERNAL VIOLENCE.—AUSTRALIA, 1924.

Cause of Death.	Males.	Females.	Persons.
Poisoning by food	21	9	30
Venomous bites and stings	1	5	6
Other acute poisonings (gas excepted)	24	12	36
Conflagration	12	..	12
Burns (conflagration excepted)	130	162	292
Accidental mechanical suffocation	31	19	50
Absorption of irrespirable or poisonous gas	5	1	6
Accidental drowning	347	87	434
Traumatism by firearms	72	4	76
Traumatism by cutting or piercing instruments	3	..	3
Traumatism by fall	302	45	347
Traumatism in mines or quarries	71	..	71
Traumatism by machines	32	..	32
Traumatism by other crushing—			
Railway accidents	187	17	204
Tramway accidents	44	10	54
Automobile accidents	287	99	386
Injuries by other vehicles	162	28	190
Other crushings	101	7	108
Injuries by animals (not poisoning)	40	3	43
Wounds of war	12	..	12
Starvation, thirst, fatigue	18	..	18
Excessive cold	1	..	1
Effects of heat	28	16	44
Lightning	11	1	12
Other accidental electric shocks	24	..	24
Homicide by firearms	14	13	27
Homicide by cutting or piercing instruments	8	9	17
Homicide by other means	34	17	51
Infanticide (murder of children under 1 year)	7	6	13
Fractures (cause not specified)	103	56	159
Other external violence (cause specified)	76	11	87
Other external violence (cause unspecified)	80	16	96
Total Deaths	2,288	653	2,941
Death Rate per 100,000 of mean population	77	23	51

(xxxvi) *Suicide.* (a) *General.* Deaths by suicide have remained fairly stationary during recent years, the number in 1920 being 636, viz., 516 males and 120 females; in 1921, 621, viz., 510 males and 111 females; in 1922, 533, viz., 441 males and 92 females; in 1923, 599, viz., 492 males and 107 females; and in 1924, 653, viz., 534 males and 119 females.

(b) *Modes Adopted.* The modes adopted by persons who committed suicide in the years 1920 to 1924 were as follows :—

SUICIDES, MODES ADOPTED.—AUSTRALIA, 1920 TO 1924.

Mode of Death.	Males.		Females.		Persons.	
	Total of 4 years 1920-23.	1924.	Total of 4 years 1920-23.	1924.	Total of 4 years 1920-23.	1924.
Poisoning	394	104	196	44	590	148
Poisonous gas .. .	16	7	9	5	25	12
Hanging or Strangulation ..	277	80	57	21	334	101
Drowning .. .	176	50	84	20	260	70
Firearms .. .	619	167	25	12	644	179
Cutting or piercing instruments	377	100	31	11	408	111
Jumping from a high place ..	25	7	12	2	37	9
Crushing .. .	40	13	10	3	50	16
Other Modes .. .	35	6	6	1	41	7
Total .. .	1,959	534	430	119	2,389	653

(c) *Death Rates.* The death rates from suicide and the proportion per 10,000 of total deaths are given in the following table :—

SUICIDE—DEATHS, DEATH RATES (a), AND PROPORTION OF TOTAL DEATHS, 1924.

State or Territory.	Number of Deaths.			Death Rates (a) from Suicide.			Proportion of 10,000 Total Deaths.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
New South Wales	220	51	271	19	5	12	185	57	130
Victoria .. .	118	34	152	15	4	9	133	45	92
Queensland ..	81	16	97	19	4	12	182	55	132
South Australia ..	51	11	62	19	4	12	193	49	127
Western Australia	48	4	52	25	2	15	235	33	159
Tasmania .. .	12	3	15	11	3	7	102	32	71
Northern Terr. ..	3	..	3	118	..	83	714	..	682
Fed. Cap. Territory	1	..	1	41	..	26	909	..	667
Australia .. .	534	119	653	18	4	11	172	50	119

(a) Number of deaths from suicide per 100,000 of mean population.

(d) *Ages.* From the following table, which shows the ages of the persons who committed suicide in 1924, it will be seen that both extreme youth and extreme old age are represented :—

AGES OF PERSONS WHO COMMITTED SUICIDE.—AUSTRALIA, 1924.

Ages.	M.	F.	Total.	Ages.	M.	F.	Total.
10 years and under 15	4	..	4	60 years and under 65	38	4	42
15 " " 20	14	7	21	65 " " 70	34	6	40
20 " " 25	34	10	44	70 " " 75	19	2	21
25 " " 30	35	15	50	75 " " 80	12	1	13
30 " " 35	55	8	63	80 " " 85	6	..	6
35 " " 40	68	20	88	85 " " 90	1	..	1
40 " " 45	61	12	73	Not stated	6	..	6
45 " " 50	51	12	63				
50 " " 55	59	10	69				
55 " " 60	37	12	49	Total Deaths ..	534	119	653

(e) *Occupations of Males.* The following table gives the occupations of the males who committed suicide in 1924 :—

OCCUPATIONS OF MALES WHO COMMITTED SUICIDE.—AUSTRALIA, 1924.

Occupation.	Deaths.	Occupation.	Deaths.
PROFESSIONAL CLASS—		INDUSTRIAL CLASS—	
Government, Defence, Law ..	8	Art and Mechanic Productions	17
Others	21	Textiles and Fibrous Materials	7
DOMESTIC CLASS—		Food and Drinks	9
Board and Lodging.. ..	14	Animal and Vegetable Sub-	
Others	15	stances	1
COMMERCIAL CLASS—		Metals and Minerals	13
Property and Finance	8	Fuel, Light and Energy	2
Art, Mechanic and Textile		Building and Construction ..	18
Products	4	Others	138
Food and Drinks	17	AGRICULTURAL, PASTORAL,	
Animal and Vegetable Sub-		MINING, ETC., CLASS—	
stances	3	Agricultural	75
Merchants and Dealers	13	Pastoral	22
Others	28	Mining and Quarrying	16
TRANSPORT AND COMMUNICATION		Others	6
CLASS—		INDEPENDENT MEANS	6
Railways	9	DEPENDENTS	9
Roads and Trams	20	OCCUPATION NOT STATED ..	19
Sea and Rivers	11		
Others	5	Total Male Deaths	534

(f) *Frequency.* The following table has been prepared to show the change which has taken place in the suicide rate during the past fifty years. The results show a fairly general increase in the rates from 99.07 per million during the years 1871-75 to a maximum of 131.17 per million for the period 1911-15, since when the rate has again subsided to a rate about 7 per cent. higher than that of 1871-75. The notes appended to the table show the limitations of the figures for the earlier years.

SUICIDES.—AUSTRALIA, 1871-75 TO 1924.

Period.	Number of Suicides.			Suicides per One Million of Persons Living. Average Annual Rate.			Suicides of Females to 100 Suicides of Males. Based on—	
	Males.	Females.	Persons.	Males.	Females.	Persons.	Absolute Figures.	Rates.
1871-75 ..	715	150	865	150.94	37.56	99.07	20.98	24.88
1876-80 ..	878	145	1,023	159.69	31.06	100.62	16.51	19.45
1881-85 ..	999	183	1,182	152.58	32.90	97.61	18.32	21.56
1886-90 ..	1,394	292	(a) 1,686	179.20	43.97	(c) 116.92	20.95	24.54
1891-95 ..	1,574	337	(b) 1,911	181.34	44.09	(d) 117.07	21.41	24.31
1896-1900	1,838	410	2,248	191.11	47.88	123.65	22.31	25.05
1901-05 ..	2,054	380	2,434	201.78	40.88	124.98	18.50	20.26
1906-10 ..	2,031	437	2,468	186.11	43.22	117.39	21.51	23.22
1911-15 ..	2,546	577	3,123	206.15	50.36	131.17	22.66	24.43
1916-20 ..	2,238	521	2,759	175.46	40.93	108.27	23.28	23.33
1921 ..	510	111	621	183.89	41.33	113.76	21.76	22.47
1922 ..	441	92	533	155.78	33.61	95.72	20.86	21.58
1923 ..	492	107	599	169.81	38.33	105.29	21.75	22.57
1924 ..	534	119	653	180.36	41.81	112.46	22.28	23.18

(a) 1705 inclusive of Western Australian figures. (b) 1984 inclusive of Western Australian figures
(c) 116.49 inclusive of Western Australian figures. (d) 119.11 inclusive of Western Australian figures.

(xxxvii) *Other Diseases.* The number of causes included under this heading is very large, amounting to no less than 81 of the items shown in the detailed classification, and deaths were recorded under every one of these with the exception of the following:—Glanders, anthrax, rabies, soft chancre, chyluria, pellagra, diseases of parathyroid gland, ankylostomiasis, other diseases of digestive system, non-puerperal diseases of breast, and other diseases of organs of locomotion. The total number of deaths under "other diseases" in 1920 was 8,219, viz., 4,753 males and 3,466 females; in 1921, 8,279, viz., 4,668 males and 3,611 females; in 1922, 7,856, viz., 4,488 males and 3,368 females; in 1923, 8,203, viz., 4,712 males and 3,491 females; and in 1924, 8,400, viz., 4,821 males and 3,579 females. Some of the diseases included here account for very considerable numbers of deaths. Particulars of the deaths included in 1924 are shown in the following table:—

DEATHS FROM "OTHER DISEASES."—AUSTRALIA, 1924.

Causes.	M.	F.	Total.	Causes.	M.	F.	Total.
Tetanus	50	21	80	Diseases of the Arteries, Aneurism, Atheroma	943	553	1,496
Myososes	2	3	5	Embolism and Thrombosis (not cerebral) .. .	54	73	127
Gonococcus Infection .. .	2	..	2	Diseases of the Veins	16	12	28
Syphilis	79	41	120	Diseases of the Lymphatic System .. .	12	4	16
Purulent Infection and Septicæmia .. .	74	37	111	Hæmorrhage (without specified cause) .. .	9	9	18
Other Infectious Diseases .. .	1	1	2	Other Diseases of the Circulatory System .. .	47	44	91
Other Tumours (Tumours of the female genital organs excepted) .. .	19	13	32	Diseases of the Mouth and its Associated Organs .. .	10	8	18
Acute Rheumatic Fever .. .	124	124	248	Diseases of the Pharynx .. .	24	26	50
Chronic Rheumatism and Gout	83	96	179	Diseases of the Oesophagus .. .	7	5	12
Scurvy	1	2	3	Intestinal Parasites .. .	7	5	12
Beri-beri	23	..	23	Other Diseases of the Intestines .. .	44	24	68
Rickets	1	..	1	Acute Yellow Atrophy of the Liver .. .	2	13	15
Diabetes	282	391	673	Hydatid Tumours of the Liver .. .	23	16	39
Anæmia, Chlorosis .. .	186	232	418	Biliary Calculi	45	96	141
Diseases of the Pituitary Gland	6	2	8	Other Diseases of the Liver .. .	89	126	215
Exophthalmic Goitre .. .	8	74	82	Diseases of the Pancreas .. .	28	40	68
Diseases of the Thyroid Gland	2	40	42	Peritonitis (without specified cause) .. .	57	51	108
Diseases of the Thymus Gland	2	5	7	Other Diseases of the Kidneys and their Adnexa .. .	125	118	243
Addison's Disease .. .	7	11	18	Calculi of Urinary Passages .. .	40	17	57
Diseases of the Spleen .. .	5	4	9	Diseases of the Bladder .. .	113	22	135
Leucæmia	47	44	91	Other Diseases of the Urethra, Urinary Abscesses, etc. .. .	31	1	32
Hodgkin's Disease .. .	31	13	44	Diseases of the Prostate .. .	288	..	288
Acute and Chronic Alcoholism .. .	163	40	203	Non-venereal Diseases of the Male Genital Organs .. .	3	..	3
Chronic Lead Poisoning .. .	24	2	26	Gangrene	76	42	118
Chronic Organic Poisonings .. .	7	2	9	Furuncle	18	18	36
Other General Diseases .. .	27	35	62	Phlegmon, Acute Abscess .. .	63	50	113
Encephalitis	63	52	115	Other Diseases of the Skin and Adnexa .. .	29	26	55
Locomotor Ataxia	55	11	66	Non-tuberculous Diseases of the Bones .. .	65	21	86
Other Diseases of the Spinal Cord	119	72	191	Other Diseases of the Joints (Tuberculosis and Rheumatism excepted) .. .	18	14	32
Paralysis without specified cause	188	137	325	Other Diseases peculiar to Infancy	213	194	407
General Paralysis of the Insane	124	19	143	Lack of Care (Infants) .. .	5	2	7
Other Forms of Mental Alienation	38	63	101				
Epilepsy	112	94	206				
Convulsions (non-puerperal) .. .	4	5	9				
Convulsions of Children under 5 years of age .. .	115	79	194				
Chorea	2	7	9				
Neuralgia and Neuritis .. .	13	14	27				
Other Diseases of the Nervous System .. .	182	134	316				
Diseases of the Eye	1	..	1				
Diseases of the Ear	36	29	65				
				Total Deaths .. .	4,821	3,579	8,400

(xxxviii) *Unspecified or Ill-defined Diseases.* The number of cases included under this heading was 805 in 1920, 721 in 1921, 665 in 1922, 691 in 1923, and 735 in 1924, of which 476 were males and 259 females. The detailed classification places these ill-defined diseases under two headings—sudden death, including syncope; and unspecified or ill-defined causes, of which the following are specimens:—Heart failure, asthenia, anasarca, atrophy, exhaustion, dropsy, ascites, and general œdema, etc. In 1924, the number of deaths which came under the first of these categories was 61, and under the second, 674. It is inevitable that cases will occur regarding which the available information is insufficient to permit of a clear definition of the fatal disease in the certificate of death. In the majority of cases, however, there is little doubt that more satisfactory certificates might have been given.

16. *Causes of Deaths in Classes.*—The figures in the preceding sub-sections relate to specific causes of death, and are of greater value in medical statistics than a mere grouping under general headings. The classification under fifteen general headings adopted by the compilers of the International Nomenclature is, however, shown in the following table, together with the death rates and percentages on total deaths pertaining to those classes:—

DEATHS, DEATH RATES (a), ETC., IN CLASSES.—AUSTRALIA, 1924.

Class.	Total Deaths.			Death Rates. (a)			Proportion of 10,000 Deaths.		
	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.
1. Epidemic, Endemic, and Infectious Diseases	3,457	2,615	6,072	117	92	105	1,112	1,095	1,104
2. General diseases not included above	3,891	3,711	7,602	131	130	131	1,251	1,554	1,383
3. Diseases of the Nervous System and of the Organs of Sense ..	2,409	2,079	4,488	81	73	77	774	871	816
4. Diseases of the Circulatory System	4,609	3,461	8,070	156	122	139	1,482	1,450	1,468
5. Diseases of the Respiratory System	3,664	2,560	6,224	124	90	107	1,178	1,072	1,132
6. Diseases of the Digestive Organs	2,611	2,127	4,738	88	75	82	840	891	862
7. Diseases of the Genito-Urinary System and Adnexa	2,261	1,589	3,850	76	56	66	727	666	700
8. Puerperal Condition .. .. .	..	738	738	..	26	13	..	309	134
9. Diseases of the Skin and of the Cellular Tissue	186	136	322	6	5	5	60	57	59
10. Diseases of the Bones and Organs of Locomotion	83	35	118	3	1	2	27	15	21
11. Malformations	359	275	634	12	10	11	115	115	115
12. Early Infancy	2,028	1,611	3,639	69	56	63	652	675	662
13. Old Age	2,247	1,909	4,156	76	67	71	722	799	756
14. External Causes	2,322	772	3,594	95	27	62	907	323	654
15. Ill-defined Diseases	476	259	735	16	9	13	153	108	134
Total	31,103	23,877	54,980	1,050	839	947	10,000	10,000	10,000

(a) Number of deaths per 100,000 of mean population.

17. *Causes of Deaths of Children under one Year.*—"Bulletin No. 42, Australian Demography," contains tables showing for twenty-six causes the ages at death of children dying during the first year of life. In the Bulletin mentioned, the particulars are given for males and females separately for Australia, but the totals for Australia only are shown hereunder for both sexes combined:—

CAUSES OF DEATHS OF CHILDREN UNDER ONE YEAR.—AUSTRALIA, 1924.

Age at Death.	Measles.	Whooping Cough.	Diphtheria.	Erysipelas.	Meningo-coccal Meningitis.	Tubercular Meningitis.	Tubercular Meningitis.	Tubercular Meningitis, other forms.	Syphilis.	Meningitis.	Convulsions.	Acute Bronchitis.	Broncho-Pneumonia.
Under 1 week ..	1	1	..	..	..	..	..	..	7	4	55	3	6
1 week and under 2 weeks ..	..	..	1	..	1	..	..	..	1	1	26	3	15
2 weeks ..	1	4	1	1	..	..	..	..	2	2	8	10	27
3 ..	5	2	2	..	..	..	..	..	3	2	4	13	23
1 month ..	1	44	5	9	2	..	..	..	8	6	8	23	76
2 months ..	1	37	2	2	2	1	2	..	6	5	5	25	58
3 ..	50	3	6	..	..	..	..	1	5	8	8	9	52
4 ..	23	4	6	..	6	..	1	2	1	14	5	6	27
5 ..	20	1	4	4	..	..	..	..	1	15	2	7	23
6 ..	18	4	1	2	1	3	2	..	2	9	5	5	31
7 ..	9	5	1	1	1	5	1	..	..	11	4	3	30
8 ..	11	4	..	4	1	3	..	..	2	11	6	3	19
9 ..	11	5	..	2	..	1	..	..	..	15	9	1	20
10 ..	7	9	6	1	5	..	3	..	..	11	4	7	19
11 ..	2	12	6	..	1	..	2	1	..	10	1	6	23
Total under 1 year ..	22	259	49	28	29	3	20	10	38	124	150	124	449
Number of deaths from each cause per 1,000 births ..	0.16	1.92	0.36	0.21	0.21	0.02	0.15	0.07	0.28	0.92	1.11	0.92	3.33

Age at Death.	Pneumonia.	Pleurisy.	Diseases of Stomach.	Diarrhoea and Enteritis.	Hernia.	Intestinal Obstruction.	Malformations.	Congenital Debility, Icterus and Sclerema.	Premature Birth.	Injury at Birth.	Other Diseases peculiar to Early Infancy.	Lack of Care.	Other Causes.	Total.
Under 1 week ..	15	1	2	14	..	2	271	311	1,620	258	305	4	41	2,921
1 week and under 2 weeks ..	5	..	2	13	..	2	66	80	161	24	40	..	20	460
2 weeks ..	14	..	3	13	..	5	36	62	124	8	22	..	31	374
3 ..	15	..	3	20	1	4	27	45	65	2	17	..	19	272
1 month ..	33	..	9	78	..	3	37	72	75	3	18	..	42	554
2 months ..	41	2	14	141	..	..	35	76	17	2	5	2	36	517
3 ..	21	1	3	133	..	3	25	68	13	2	..	1	28	440
4 ..	22	1	9	164	..	9	24	39	6	1	..	..	22	393
5 ..	13	..	3	134	1	7	13	21	3	..	..	..	28	303
6 ..	17	1	3	142	..	10	11	21	1	..	..	..	23	312
7 ..	17	..	3	114	..	7	4	9	1	..	..	..	21	247
8 ..	23	..	3	99	..	6	7	9	..	..	..	..	20	232
9 ..	17	1	3	110	..	5	2	7	..	..	..	..	21	233
10 ..	25	2	4	99	..	1	6	10	1	..	..	..	20	241
11 ..	14	..	2	81	..	4	3	8	..	..	..	..	26	202
Total under 1 year ..	292	9	66	1,355	2	68	567	838	2,037	300	407	7	398	7,701
Number of deaths from each cause per 1,000 births ..	2.17	.07	.49	10.04	.02	0.51	4.20	6.21	15.47	2.22	3.02	.05	2.95	57.08

Pre-natal influences, as evidenced in malformations, congenital debility, and premature birth, together with injuries at birth, accounted for 3,792, or 49 per cent., of all deaths under one year; and of these 3,792 deaths, 2,460, or 65 per cent., occurred within a week of birth. Among the survivors of the first week, diarrhoea and enteritis had the most fatal effects. These diseases were responsible for 1,355 deaths, representing nearly 18 per cent. of all deaths under one year, or 10.04 per 1,000 births. Excluding deaths from pre-natal causes already referred to, over 47 per cent. of the deaths between three months and one year of age were due to diarrhoea and enteritis.

18. Ages at Death of Married Males and Females, and Issue.—“Bulletin No. 42 Australian Demography,” contains a number of tables, showing the age at marriage,

age at death, duration of life after marriage, birthplaces, and occupations, in combination with the issue of married persons who died in Australia in 1924. A short summary of the tables mentioned is given hereunder. Deaths of married males in 1924 numbered 16,566, and of married females, 15,202. The tabulations which follow deal, however, with only 16,215 males and 14,946 females, the information in the remaining 607 cases being incomplete. The total number of children in the families of the 16,215 males was 77,849; and of the 14,946 females, 74,379. The average number of children is shown for various age-groups in the following table :—

**AGES AT DEATH OF MARRIED MALES AND FEMALES, AND AVERAGE ISSUE.—
AUSTRALIA, 1924.**

Age at Death.	Average Family of Males.	Average Family of Females.	Age at Death.	Average Family of Males.	Average Family of Females.
Under 20 years ..	0.60	0.82	70 to 74 years ..	5.77	5.91
20 to 24 years ..	1.00	1.17	75 „ 79 „ ..	6.30	6.47
25 „ 29 „ ..	1.20	1.71	80 „ 84 „ ..	6.66	6.70
30 „ 34 „ ..	1.93	2.30	85 „ 89 „ ..	6.96	6.77
35 „ 39 „ ..	2.56	3.22	90 „ 94 „ ..	7.14	6.53
40 „ 44 „ ..	3.05	3.62	95 „ 99 „ ..	6.94	6.44
45 „ 49 „ ..	3.45	3.67	100 years and up- wards ..	8.67	7.00
50 „ 54 „ ..	3.66	3.91	Age unspecified ..	..	2.33
55 „ 59 „ ..	4.11	4.55			
60 „ 64 „ ..	4.59	5.04			
65 „ 69 „ ..	5.21	5.59	All ages ..	4.80	4.98

The figures in the preceding table include the issue both living and dead, the proportion between them, taking the issue of deceased males and females together, being about 1,000 to 284. The totals are shown in the following table :—

ISSUE OF MARRIED MALES AND FEMALES.—AUSTRALIA, 1924.

Issue of Married Males.	Males.	Females.	Total.	Issue of Married Females.	Males.	Females.	Total.
Living ..	31,052	30,944	61,996	Living ..	28,127	28,450	56,577
Dead ..	8,901	6,952	15,853	Dead ..	9,903	7,899	17,802
Total ..	39,953	37,896	77,849	Total ..	38,030	36,349	74,379

These figures show a masculinity in the issue of 2.46, which is in harmony with the experience of the birth statistics.

19. **Ages at Marriage of Deceased Males and Females, and Issue.**—While the table giving the average families of married males and females naturally shows an increase in the averages with advancing ages at death, the following table, which gives the average families of males and females according to the age at marriage of the deceased parents, shows a corresponding decrease in the averages as the age at marriage advances :—

AGES AT MARRIAGE OF DECEASED MALES AND FEMALES, AND AVERAGE ISSUE.—AUSTRALIA, 1924.

Age at Marriage.		Average Family of Males.	Average Family of Females.	Age at Marriage.		Average Family of Males.	Average Family of Females.
Under 20 years	..	6.17	6.96	50 to 54 years	..	1.12	..
20 to 24	..	5.84	5.37	55 „ 59	..	0.84	..
25 „ 29	..	5.03	4.00	60 „ 64	..	0.39	..
30 „ 34	..	4.17	2.64	65 years and upwards	..	0.42	..
35 „ 39	..	3.55	1.33	Age unspecified	..	4.92	5.29
40 „ 44	..	2.42	0.34				
45 „ 49	..	1.81	0.05	All ages	..	4.80	4.98

20. Duration of Life after Marriage of Males and Females.—The duration of life after marriage has been tabulated for males and females both in combination with the age at marriage, and with the total and average issue. The tables containing the results do not, however, lend themselves to condensation, and are, therefore, omitted here. They will be found in Bulletin No. 42 of "Australian Demography."

21. Birthplaces of Deceased Married Males and Females, and Issue.—The following table shows the birthplaces of married males and females who died in 1924, together with their average issue. No generalizations can, of course, be made in those cases in which the number of deaths was small, but where the figures are comparatively large, as in the case of natives of Australia, differences occur between the averages of the individual States which appear inexplicable on any other ground than that of different age constitution of the locally born population of the various States due to the different dates of the foundation of settlement. Thus, New South Wales and Tasmania, owing to their early settlement, contain a larger number of locally-born inhabitants of advanced ages than Victoria and Queensland, in which colonization was begun almost fifty years after the foundation of New South Wales. It will be noted that the differences occur both in the male and female averages. Although the figures apply to Australia as a whole, it must be borne in mind that the vast majority of deaths of natives of any one State are registered in that particular State.

BIRTHPLACES OF DECEASED MARRIED MALES AND FEMALES, AND AVERAGE ISSUE.—AUSTRALIA, 1924.

Birthplace.	Married Males.		Married Females.		Birthplace.	Married Males.		Married Females.	
	Deaths.	Average Family.	Deaths.	Average Family.		Deaths.	Average Family.	Deaths.	Average Family.
New South Wales	3,149	4.77	3,272	4.94	British India and Ceylon	44	3.70	27	5.30
Victoria	2,930	4.08	2,770	4.12	Other British Possessions in Asia	2	5.50	1	5.00
Queensland	563	3.91	650	3.89	China	61	3.73	2	4.00
South Australia	1,090	4.65	1,024	4.63	Other Asiatic Countries	22	3.50	9	5.11
Western Australia	104	4.89	138	4.73	Union of South Africa	15	3.53	10	3.40
Tasmania	658	5.07	627	5.27	Other African Countries	5	5.40	6	2.83
Federal Capital Territory	..	..	1	2.00	Canada	33	4.21	18	4.23
New Zealand	121	3.31	114	3.68	Other British Possessions in America	4	4.25	2	7.00
England	3,957	5.20	3,092	5.39	United States	48	4.67	25	4.84
Wales	147	4.80	116	5.92	Other American Countries	16	2.60	7	6.43
Scotland	1,077	5.15	881	5.61	Other Polynesian Islands	7	4.14	10	4.30
Ireland	1,286	5.62	1,652	5.74	At Sea	52	6.15	64	6.19
Other British Possessions in Europe	22	4.36	18	4.83	Unspecified	34	3.35	20	4.86
Denmark	84	5.04	35	6.00					
France	36	5.11	22	2.95					
Germany	342	6.08	241	6.25					
Italy	55	2.75	16	4.31					
Norway	31	4.77	4	5.50					
Russia	25	4.72	17	6.18					
Sweden	71	3.85	12	3.83					
Other European Countries	124	3.61	34	5.29					
					Total	16,215	4.80	14,946	4.98

22. *Occupations of Deceased Married Males, and Issue.*—A final tabulation shows the average issue in combination with the occupation of deceased males.

**OCCUPATIONS OF DECEASED MARRIED MALES, AND AVERAGE ISSUE.—
AUSTRALIA, 1924.**

Occupation.	Deaths of Married Males.	Average Family.	Occupation.	Deaths of Married Males.	Average Family.
PROFESSIONAL CLASS—			INDUSTRIAL CLASS—		
Government, Defence, and Law	398	4.29	Art and Mechanic Products	741	4.44
Others	617	4.10	Textiles and Fibrous Materials	363	4.42
			Food and Drinks	216	4.46
DOMESTIC CLASS—			Animal and Vegetable Sub-		
Board and Lodging ..	275	3.40	stances	63	5.27
Others	255	3.88	Metals and Minerals	398	5.14
			Fuel, Light and Energy	66	3.08
COMMERCIAL CLASS—			Building and Construction ..	1,049	4.92
Property and Finance ..	219	3.84	Others	2,997	4.88
Art, Mechanic and Textile					
Products	158	3.47	AGRICULTURAL, PASTORAL,		
Food and Drinks ..	438	4.50	MINING, ETC., CLASS—		
Animal and Vegetable Sub-			Agricultural	2,480	5.99
stances	65	4.15	Pastoral	653	5.35
Fuel, Light and Metals ..	37	4.86	Mining and Quarrying ..	903	5.00
Merchants and Dealers ..	477	4.50	Others	121	4.93
Others	875	3.48			
TRANSPORT AND COMMUNICA-			INDEPENDENT MEANS ..	481	5.59
TION CLASS—					
Railways	501	4.77	DEPENDENTS	32	3.78
Roads and Trams ..	546	4.30			
Sea and Rivers ..	319	3.87	OCCUPATION NOT STATED ..	341	5.06
Others	131	3.93			
			Total	16,215	4.80

§ 4. Graphical Representation of Vital Statistics.

1. *General.*—The progressive fluctuations of the numbers of births, marriages, and deaths are important indexes of the economic conditions and social ideals of a community. Graphs have accordingly been prepared which show these fluctuations. It should be remembered, however, that, normally, the increase of births and marriages should be proportional to the growth of population.

2. *Graphs of Annual Births, Marriages, and Deaths.*—The outstanding features of the graph representing births are:—An almost continuous rise in the numbers from 1860 to 1891; a decline till 1898, associated with the commercial crisis of 1891-3; a sharp fall in 1903 which accompanied a severe drought; an uninterrupted increase from 1903 to 1914, the total for 1914 being the highest recorded; a rapid decline until 1920, the result of war conditions. The figures for the last five years show a tendency to return to normal.

The graph for marriages up to 1914 discloses approximately the same features as that for births—financial crises and droughts having a similar effect. The numbers for 1914 and 1915 showed a considerable increase over previous years. From 1916 to 1918 there was a rapid fall, the numbers being much below those of pre-war years. During 1919 and 1920 the recovery was very rapid, the total for the latter year being the highest ever recorded. The totals for 1921 to 1924 were not so favourable.

The characteristic feature of the graph of deaths is its irregular nature. On the whole, however, there is an increase which is due to the growth of population.

3. Graphs of Annual Birth, Marriage, and Death Rates, and Rate of Natural Increase.—The graph of the birth rate indicates a well-marked decline throughout the whole period. This reduction of rate has been subject to fluctuations, there being two periods of arrested decline, viz., from 1877 to 1890, and from 1903 to 1912.

The variations in the marriage rates, though less abrupt than those in the birth and death rates, have ranged from a minimum of 6.08 per 1,000 which marked the culmination of a commercial depression to a maximum of 9.62 per 1,000 in 1920.

On the whole, the graph for the death rate furnishes clear evidence of a satisfactory decline during the period. The graph brings into prominence six years in which the rates were very high when compared with adjacent years, viz., 1860, 1866, 1875, 1884, 1898, and 1919. Epidemics of measles were largely responsible for the high rates in the first five years, while influenza caused the increase during 1919.

The graph of natural increase shows roughly the same variations as that for the birth rate, but the influence of the death rate is indicated by the very low rates of natural increase for 1875, 1898, and 1919, which resulted from the exceptionally high death rates of those years.

CHAPTER XXVI.

MISCELLANEOUS.

§ 1. Patents, Trade Marks, and Designs.

1. *Patents.*—(i) *General.* The granting of patents is regulated by the Commonwealth Patents Act 1903–21, which, in regard to principle and practice, has the same general foundation as the Imperial Statutes, modified to suit Australian conditions. The Act is administered by a Commissioner of Patents. Comparatively small fees, totalling £8, are now sufficient to obtain for an inventor protection throughout Australia, Papua and the Territory of New Guinea, and the only renewal fee (£5) is payable before the expiration of the seventh year of the patent, or within such extended time, not exceeding one year, and upon payment of further fees, as may be allowed.

(ii) *Summary.* The number of separate inventions in respect of which applications were filed during the years 1920 to 1924 is given in the following table, which also shows the number of patents sealed in respect of applications made in each year.

PATENTS, AUSTRALIA.—SUMMARY, 1920 TO 1924.

Particulars.	1920.	1921.	1922.	1923.	1924.
No. of applications	5,481	5,072	5,431	5,306	5,432
No. of applications accompanied by provisional specifications	2,875	3,378	3,643	3,454	3,637
Letters patent sealed during each year	2,033	2,573	3,273	2,464	2,313

(iii) *Revenue.* The revenue of the Commonwealth Patents Office during the years 1920 to 1924 is shown hereunder :—

PATENTS, AUSTRALIA.—REVENUE, 1920 TO 1924.

Particulars.	1920.	1921.	1922.	1923.	1924.
	£	£	£	£	£
Fees collected under—					
States Patents Acts	31	5	4	3	..
Patents Acts 1903–21	27,100	28,516	30,912	27,995	26,259
Receipts from publications	417	385	561	599	1,004
Total	27,548	28,906	31,477	28,597	27,263

2. *Trade Marks and Designs.*—(i) *Trade Marks.* Under the Trade Marks Act 1905, the Commissioner of Patents is also Registrar of Trade Marks. This Act has been amended from time to time, the last amendment having been made in 1922. Special provisions for the registration of a “Commonwealth Trade Mark” are contained in the

Act of 1905, and are applicable to all goods included in or specified by a resolution passed by both Houses of Parliament that the conditions as to remuneration of labour in connexion with the manufacture of such goods are fair and reasonable.

(ii) *Designs.* The Designs Act 1906, as amended by the Patents, Designs and Trade Marks Act 1910, and the Designs Act 1912, is now cited as the Designs Act 1906–12. Under this Act a Commonwealth Designs Office has been established, and the Commissioner of Patents appointed “Registrar of Designs.”

(iii) *Summary.* The following table gives particulars of applications for trade marks and designs received and registered under the Commonwealth Acts from 1920 to 1924:—

TRADE MARKS AND DESIGNS, AUSTRALIA.—SUMMARY, 1920 TO 1924.

Applications.			1920.	1921.	1922.	1923.	1924.
RECEIVED.							
Trade Marks	..	..	3,045	2,410	2,763	2,773	2,829
Designs	..	..	278	357	427	488	498
REGISTERED.							
Trade Marks	..	..	1,651	2,542	1,991	2,038	1,801
Designs	..	..	226	300	380	377	453

(iv) *Revenue.* The following table shows the revenue of the Trade Marks and Designs Office during the years 1920 to 1924:—

TRADE MARKS AND DESIGNS, AUSTRALIA.—REVENUE, 1920 TO 1924.

Particulars.	1920.			1921.			1922.			1923.			1924.		
	Trade Marks.	Designs.	Publications.	Trade Marks.	Designs.	Publications.	Trade Marks.	Designs.	Publications.	Trade Marks.	Designs.	Publications.	Trade Marks.	Designs.	Publications.
Fees collected under State Acts	£ 9	£ ..	£ ..	£ 1	£ ..	£ ..	£ 1	£ ..	£ ..	£ ..	£ ..	£ ..	£ ..	£ ..	£ ..
Fees collected under Commonwealth Acts	12,607	368	107	10,557	427	122	9,282	499	131	9,263	530	102	8,710	561	238
Total	12,616	368	107	10,558	427	122	9,283	499	131	9,263	530	102	8,710	561	238

§ 2. Copyright.

1. *Legislation.*—Copyright is regulated by the Commonwealth Copyright Act of 1912, details of which will be found in previous issues of the Official Year Book (see No. 8, p. 1066), while, subject to modifications relating to procedure and remedies, the British Copyright Act of 1911 has been adopted as law and declared to be in force within Australia.

Reciprocal protection was extended in 1918 to citizens of Australia and of the United States under which copyright may be preserved in the latter country by registration at the Library of Congress, Washington. The Commonwealth Government promulgated a further Order in Council which came into operation on the 1st February, 1923, and extended the provisions of the Copyright Act to the foreign countries of the Copyright Union, subject to the accomplishment of the conditions and facilities therein contained.

2. **Applications and Registrations.**—The following table gives particulars of applications for copyright received and registered, and the amount of revenue received for the years 1920 to 1924 :—

COPYRIGHT, AUSTRALIA.—SUMMARY, 1920 TO 1924.

Particulars.	1920.	1921.	1922.	1923.	1924.
Applications received—					
Literary No.	922	953	1,027	1,133	1,145
Artistic No.	203	146	185	186	150
International No.	..	5	14	3	2
Applications registered—					
Literary No.	879	809	942	1,105	1,059
Artistic No.	185	138	160	190	138
International No.	..	4	..	13	2
Revenue £	287	292	312	339	336

§ 3. Local Option, and Reduction of Licences.

1. **General.**—Local option concerning the sale of fermented and spirituous liquors is in force in all the States, the States being divided into areas generally coterminous with electoral districts, and a poll of the electors taken from time to time in each district regarding the continuance of the existing number of licensed premises, the reduction in number, or the closing of all such premises. Provision is made for giving effect to the results of the poll in each district in which the vote is in favour of a change.

2. **New South Wales.**—(i) *Local Option.* The Liquor Act of 1912 made provision for taking a vote of the electors on the parliamentary rolls on the question of continuance of existing licences, the reduction of the same, or that no licence be granted of public houses, wine-shops, and clubs. This vote was to take place simultaneously with that for a general election. Three such polls were taken, but in 1919, by an Amending Act, further taking of polls was suspended pending a referendum on the question of prohibition, to be taken within eighteen months after the passing of this Act. This referendum was not held, and a later amendment of the Act in 1923 fixed the first Saturday in September, 1928, as the day on which the vote is to be taken.

(ii) *Licences Reduction Board.* The Liquor (Amendment) Act of 1923 provided for the reconstitution, as from 1st July, 1924, of the Licences Reduction Board and of the Licensing Courts which control the issue of licences. Three Licensing Magistrates constitute the Licensing Court in each licensing district, as well as the Licences Reduction Board, so that one tribunal controls all matters relating to the issue and withdrawal of licences. The funds for compensation are obtained by a levy at the rate of 3 per cent. on the value of all liquor purchased during the preceding year, of which the licensees pay one-third and the owners two-thirds. Since the beginning of 1923 the Board has also

been empowered to reduce the number of Australian wine licences, the holders of which are liable to pay fees into the compensation fund at the rate of 1 per cent. of their purchases.

The Board, which was established by the Liquor (Amendment) Act of 1919, commenced operations in 1920, and up to 31st December, 1924, had terminated 240 publicans' licences and 56 wine licences, and had accepted the surrender of 56 publicans' licences and 1 wine licence. The compensation awarded was £452,825 in respect of 295 publicans' licences and £49,600 for 57 wine licences, while compensation had not been claimed in respect of one publican's licence in the Sydney electoral district. The reductions made by the Board in the Sydney electoral district were 69 hotel licences, and the compensation awarded amounted to £152,500, and in the Newcastle electoral district the reductions were 23 hotel licences and the compensation awarded £29,470. The other reductions were in country districts. The fees payable into the compensation fund amounted to £1,011,344. During the years 1920 to 1924, 59 hotel licences were terminated by other than the Board's action, and 9 new licences were granted, and during 1923 and 1924, 6 wine licences were terminated.

3. *Victoria.* (i) *Local Option.* Under the Licensing Act of 1922, the previous system of local option was abolished, and provision was made for a vote of the electors for the Legislative Assembly to be taken once in every eighth year, the first of such votes to be taken in the year 1930. The resolution to be then submitted is:—"That licences shall be abolished." If that resolution is carried, the following resolution shall be submitted to the electors at each subsequent vote, until carried:—"That licences shall be restored." This provision makes the vote State-wide instead of being restricted to the individual licensing districts.

The Act also prescribes that each licensing district shall consist of an electoral district, instead of the subdivisions which under the previous Acts formed licensing districts. The Licensing Court is also empowered to reduce the number of licences (i.e., victuallers' licences, grocers' licences, Australian wine licences, spirit merchants' licences, and registered clubs) which in its opinion is greater than the number necessary for the convenience of the public or the requirements of the locality; such reduction, however, is not to exceed one-fourth of the number of licences of each description which the Court was empowered to renew in the licensing district at the commencement of the Act, nor shall it exceed the extent to which there are moneys available for compensation in the Licensing Fund.

(ii) *Licences Reduction Board.* This Board was established in 1906 with power to reduce the number of licensed victuallers' premises in districts in which there were more than the statutory number of licences. It has also the duty of fixing and awarding compensation to the owners and licensees of closed hotels. The compensation fund is derived from vendors of liquor who must all pay in proportion to the benefit they derive from their licences. The amount charged to the wholesale trade is 4 per cent. of the cost of all liquors sold to non-licensed persons, no charge being made on sales to other licensed vendors. The retail trade is charged 6 per cent. on liquor purchases, except the holders of Australian wine licences, who are charged 4 per cent. The expenses of operating the Licensing Act are a charge on the Compensation Fund, and, in addition, £23,000 is paid annually to the Police Superannuation Fund, and £68,000 to the municipalities which formerly granted licences. The balance is available for compensation purposes, but any surplus at the end of the financial year over an increment in the funds of £20,000 annually is carried to Consolidated Revenue.

The maximum compensation, so far as victuallers' licences are concerned, is now governed by the trading results for the ten years ending on the 31st December, 1916, and that payable to any of the holders of other licences is based on the loss accruing on a lease for a period not exceeding 3 years. In fixing the amount, allowance must be made for the percentage fees paid in respect of the licence for the 3 years following the passing of the Licensing Act 1916. Compensation is payable to both owners and licensees of hotels closed by the Board, but only to licensees in any other closings.

Under the 1922 Act, the Court has held deprivation sittings each year in different licensing districts, and has taken away 58 victuallers', 21 Australian wine, 3 spirit merchants' and 2 grocers' licences. When the Board came into existence in 1906, the number of hotels licensed was 3,521, of which 73 were roadside victuallers', and up to the 30th June, 1925, the number closed was 1,546. Of these, 1,150 represented hotels delicensed, and 396 hotels surrendered, the compensation paid to owners and licensees amounting to £762,036 and £150,515 respectively.

(iii) *Mallee and Additional Licences.* Under the 1916 Act, special provisions were made for the granting of victuallers' licences in the Mallee, and by the 1922 Act these provisions as amended by that Act are extended to any area outside the Mallee country proclaimed for the purpose. Power is given to proclaim areas containing 500 resident electors when petitions signed by a majority of the residents are lodged, and where the Licensing Court after inquiry recommends this course. On the proclamation of an area, a poll of the electors is to be taken, at which, if the poll is to be recognized, one-third of those enrolled must vote. A majority of those voting decides whether a licence is to issue or not. The annual value by which such licence adds to the annual value of the land and buildings is to be fixed by the Court, and the amount so fixed is to be paid by the licensee into the Licensing Fund. Under these provisions, 11 areas have been proclaimed, in 10 of which polls were taken and resulted in favour of licence. Licences have now been granted in 7 such areas.

4. *Queensland.* (i) *Local Option.* Local Option is regulated in Queensland by the Liquor Act of 1912, as amended by the Liquor Act Amendment Acts of 1920 and 1923. A vote on the question is to be taken on the request of one-tenth of the number of electors in an area, which is defined in the request, and such area may be (a) an electoral district, or (b) an electoral division of an electoral district, or (c) a group of two or more divisions of an electoral district, provided that the whole of such local option area is wholly comprised within one and the same electoral district. A separate request is necessary for each resolution on which a vote is to be taken. The resolutions on which a vote may be taken are :—(a) that the number of licences in the area be reduced by one-fourth of the existing number, (b) that the number of licences be further reduced by one-fourth of the number existing when resolution (a) was carried, (c) that the number of licences be still further reduced by one-fourth of the number existing when resolution (a) was carried, (d) that the sale of intoxicating liquors in the area shall be prohibited, and (e) that new licences may be granted in the area. Any resolution shall be carried if at least 35 per cent. of the electors of the area have voted and if, in the case of resolutions (a), (b), or (c) the majority of votes has been given in favour of the resolution, or, in the case of resolutions (d) or (e), at least three-fifths of the votes have been given in favour of the resolution.

Provision is made by the amending Act of 1920 under which every local option vote must be taken in the month of May in every third year on a day to be fixed by the Governor in Council, but no vote may be taken on the same day as the State General Election or a Commonwealth General or Senate Election, and every request must be made before the first of December in the year next preceding the year in which the local option vote is to be taken. On the 16th May, 1925, 43 polls were taken as requested in local option areas defined by the petitioners on the questions of prohibition in 25 electoral districts, and new licences in 18 electoral districts.

Polls were taken in 1919, in which year there were 11 on the question of increase or new licences, and 1 on the question of reduction of licences. Increase was carried in 5 areas, but in 2 of these a sufficient number of electors did not vote. The poll in one area resulted in a majority against reduction.

For the polling on Saturday, 26th May, 1923, 13 requests were received by the Home Secretary, and the voting was on the question of increase or new licences. Increase was carried in 10 areas, but in only 3 cases a sufficient number of electors voted, and at least three-fifths of the votes given were in favour of new licences.

(ii) *State Management, Prohibition, or Continuance of the Present System.* The Liquor Act Amendment Act of 1920 provides that a poll shall be taken of the electors of every electoral district every three years on the following resolutions :—(a) State management

of manufacture, importation, and sale of fermented and spirituous liquors; (b) prohibition of manufacture, importation, and retail of fermented and spirituous liquors, to take effect in July, 1925; (c) continuance of the present (or if (a) or (b) has been carried, return to the earlier) system of manufacture, importation, and retail of fermented and spirituous liquors. The Liquor Acts Amendment Act 1923 provides that after the poll in October, 1923, no further poll under the Act of 1920 shall be taken.

The first poll was taken in October, 1920. Voting was compulsory under a compulsory preferential system, and State management was everywhere defeated. In 14 areas majorities were recorded for (b), and in 58 areas continuance was carried, with a majority for the whole State of 38,092 votes. The second poll was held in October, 1923. In 4 areas majorities were recorded for (b), and in 68 areas continuance was carried with a majority for the whole State of 88,879 votes.

5. *South Australia.*—In this State the subject of local option is regulated by Part VIII. of the Licensing Act 1917. Under this Act each electoral district for the House of Assembly is constituted a local option district, and each electoral district may, by proclamation of the Governor, be divided into local option districts. A quorum of 500 electors, or of one-tenth of the total number of electors—whichever is the smaller number—in any district may petition the Governor for a local option poll. The persons entitled to vote are those whose names appear on the electoral roll and who reside in the local option district. A local option poll is taken on the same date as a general election. A poll was taken in the Local Option District of Encounter Bay on the 5th April, 1924. The voting resulted as follows:—

(a) That the number of licences be reduced	.. .. .	499 votes
(b) That the number of licences be not increased or reduced	.. .. .	951 ..
(c) That the Licensing Court may in its discretion increase the number of licences	.. .. .	100 ..

In order to settle any doubt as to the validity of the proclamation of 1917 relating to local option districts, an Act was passed in 1922 by which such proclamation was declared to be valid, and the local option resolutions in force in old districts at the time of the proclamation were declared to be still in force notwithstanding any alterations in the boundaries of the districts.

6. *Western Australia.*—(i) *General.* By an Amending Act No. 39 of 1922, the Local Option provisions of the Licensing Act 1911 were repealed, and in lieu thereof a Licences Reduction Board was constituted, and charged with the duty of reducing the number of licences throughout the State over a period of 6 years from 1st January, 1923, to the extent of the money for the time being to the credit of a fund to enable compensation to be paid to the lessors and licensees of premises deprived of a licence. The fund is formed by a levy of 2 per cent. per annum on the amount of liquor purchased for licensed premises, excluding duties thereon. The Licensing Magistrates (three in number) having jurisdiction throughout the State constitute the Reduction Board. Owners and licensees must be summoned before the Board to show cause why their premises should not be deprived of a licence; and in determining which licences shall cease to be in force the Board must consider the convenience of the public and the requirements of the locality, and, subject thereto, the character and accommodation afforded by the licensed premises, the manner in which the business has been conducted, and the distance between the premises and other licensed premises nearest thereto. Subject to the foregoing considerations, regard must be paid to convictions of the licensee within the preceding three years for offences against the licensing laws. The determination of the Board to deprive any premises of a licence is final; and on payment or tender of compensation the licence becomes void at the expiration of the current period for which it is granted. Compensation to an owner for the diminution in the value of the premises is limited to the difference in the rental value for 3 years; and to the licensee to the amount of net profits for 2 years, based on the average of the three years next preceding notice of deprivation. Provision is made to enable the lessee of premises deprived of a licence to surrender the

lease, or require the rent to be adjusted by arbitration. Provision is also made for an apportionment between lessor and licensee of the contribution to the compensation fund, if the Board thinks fit.

(ii) *Prohibition.* In addition to the above provisions, the Act of 1922 provides that in the year 1925 and in every fifth year thereafter on a day to be fixed by proclamation a poll shall be taken in each electoral district as to whether prohibition shall come into force. It also provides that where prohibition has been carried and is in force, the proposal shall be that the licences for sale of intoxicating liquor be restored. Every person entitled to vote at an election of members of the Legislative Assembly is entitled to vote at the poll. The proposal is carried if three-fifths at least of the number of votes given throughout the State are in favour thereof, provided that it shall not be carried unless 30 per cent. or more of the number of Assembly electors throughout the State vote for the proposal. If prohibition comes into force it takes effect at the expiration of the year in which the vote was taken, and all licences for the sale of intoxicating liquor cease, and the registration of all clubs is annulled, and until licences are restored no licences may be granted or certificates of clubs be registered. Nothing, however, shall prohibit the sale of alcoholic liquor for use in arts or manufacture, or for medical, scientific, sacramental or industrial purposes. Where a resolution of prohibition is carried, no compensation will be payable to any person whomsoever. The poll shall not be taken on the same day as elections for the Legislature. A poll was taken on the 4th April, 1925, with the following result:—In favour of prohibition, 41,362; against, 77,113; informal, 658; total, 119,133. The percentage of persons voting on the number enrolled (200,212) was 59.5.

7. *Tasmania.*—(i) *General.* In this State the subject of Local Option is dealt with in Part V. (Sections 39 to 53) of "The Licensing Act 1908" as amended by the "Licensing Act 1917". The provisions of Part V. of the Act of 1908 did not come into force until 1st January, 1917. It was thereby provided that a poll of ratepayers was to be taken in each city and in each municipality in which more than one licensed house was situate, once in every third year. The most recent polls taken were in December, 1923, in Hobart and Launceston, and in April, 1924, in other municipalities. The resolutions submitted at the polls in accordance with the Act were (a) for continuance of the existing number of licences, (b) for reduction in such number. The Act provided that a resolution was carried if a majority in number of the votes was given in favour thereof, provided that such resolution should not be carried unless 25 per cent. or more of the number of the electors on the roll voted upon such resolution. In neither of the cities (Hobart and Launceston) was either resolution carried, the statutory proportion of the electors not having voted at either poll. In one municipality the resolution for continuance was carried. In each of the remaining 39 municipalities in which polls were taken, the statutory proportion of electors failed to vote, and accordingly no resolution was carried.

(ii) *Results of Polls.* The following table shows the results of the Local Option polls taken in each of the cities (Hobart and Launceston) in December, 1923, and in the municipalities in April, 1924:—

LOCAL OPTION POLLS.—TASMANIA, 1923 AND 1924.

Poll taken at—	Electors on Roll.	Votes for Continuance.	Votes for Reduction.	Informal Votes.
	No.	No.	No.	No.
Hobart	11,806	750	1,526	77
Launceston	6,520	579	1,252	146
Municipalities	37,973	3,612	2,950	316
Totals	56,299	4,941	5,728	539

§ 4. Lord Howe Island.

1. **Area, Location, etc.**—Between Norfolk Island and the Australian coast is Lord Howe Island, in latitude $31^{\circ} 30'$ south, longitude $159^{\circ} 5'$ east. It was discovered in 1788. The total area is 3,220 acres, the island being 7 miles in length and from $\frac{1}{2}$ to $1\frac{1}{2}$ miles in width. It is distant 436 miles from Sydney, and in communication therewith by monthly steam service. The flora is varied and the vegetation luxuriant, with shady forests, principally of palms and banyans. The highest point is Mount Gower, 2,840 feet. The climate is mild and the rainfall abundant, but on account of the rocky formation only about a tenth of the surface is suitable for cultivation.

2. **Settlement.**—The first settlement was by a small Maori party in 1853; afterwards a colony was settled from Sydney. Constitutionally, it is a dependency of New South Wales, and is included in the electorate of Sydney. A Board of Control manages the affairs of the island and supervises the palm seed industry referred to hereunder.

3. **Population.**—The population at the Census of 3rd April, 1921, was 65 males, 46 females—total 111.

4. **Production, Trade, etc.**—The principal product is the seed of the native or *Kentia* palm. The lands belong to the Crown. The occupants pay no rent, and are tenants on sufferance.

§ 5. Commonwealth Institute of Science and Industry.

1. **General.**—An account of the origin of the temporary Institute was given in Official Year Book No. 9, pp. 1135–8, while the progress of its activities has been outlined in succeeding issues.

The "Institute of Science and Industry Act 1920," assented to 14th September, 1920, provides for the establishment of the Institute on a permanent basis.

The Act also provides that the Institute shall establish (a) a Bureau of Agriculture, (b) a Bureau of Industries, and (c) such other Bureaux as the Governor-General determines. Power is given for the establishment of a General Advisory Council and Advisory Boards in each State to advise the Director with regard to—(a) the general business of the Institute or any Bureau thereof, and (b) any particular matter of investigation or research.

The term for which the appointment of Director is made is five years, and any person so appointed shall at the expiration of his term of office be eligible for reappointment. The first director of the permanent Institute is Sir G. H. Knibbs, K.B., C.M.G., Hon. F.S.S., M.I.I.S., Hon. M.S.S., Paris, Hon. M. Amer., S.A., etc., etc., formerly Commonwealth Statistician, who was appointed on the 18th March, 1921.

Under the Act the Director shall co-operate, so far as is possible, with existing State organizations in the co-ordination of scientific investigations. The statutory powers and functions of the Director are as follow:—(a) the initiation and carrying out of scientific researches in connexion with, or for the promotion of, primary or secondary industries in Australia; (b) the establishing and awarding of industrial research studentships and fellowships; (c) the making of grants in aid of pure scientific research; (d) the recognition or establishment of associations of persons engaged in any industry or industries for the purpose of carrying out industrial scientific research, and the co-operation with and the making of grants to such associations when recognized or established; (e) the testing and standardization of scientific apparatus and instruments, and of apparatus, machinery, materials and instruments used in industry; (f) the establishment of a Bureau of Information for the collection and dissemination of information relating to scientific and technical matters; and (g) the collection and dissemination of information regarding industrial welfare and questions relating to the improvement of industrial conditions.

2. *Work of the Institute.*—The Institute has made investigations into various matters of importance to Australia, and has issued a number of bulletins and pamphlets. The subjects considered in previous years are briefly indicated on page 1037 of Year Book No. 15. The more important subjects studied in recent years are :—

- A. Agricultural and Pastoral Industries.* (i) Prickly Pear, (ii) White Ant Pest, (iii) Cereals, (iv) Viticultural Problems, (v) Sheep Blow-fly, (vi) Food Preservation, (vii) Cattle Tick, (viii) Castor Beans, (ix) Fruit By-products, (x) Dehydration of Fruit and Vegetables, (xi) Milk Products, (xii) Fertilizers, (xiii) Herbicides, (xiv) Animal Pests, (xv) Citrus Fruit Problems, (xvi) Bunchy-top of Bananas, (xvii) Seed Improvement, (xviii) Buffalo-fly pest.
- B. Forest and Vegetable Products.* (i) Paper Pulp, (ii) Tanning Materials, (iii) Preservation of Timber, (iv) Wood Borers, (v) Essential Oils, (vi) Wood Waste, (vii) Physical Properties of Australian Timbers.
- C. Manufacturing Industries.* (i) Leather and Tanning, (ii) Pottery, (iii) Engineering Standardization, (iv) Liquid Fuels, (v) Power Alcohol, (vi) Paints, (vii) Animal Products, (viii) Textiles, (ix) Building Materials, (x) Oils, Fats and Waxes, (xi) Refrigeration and Cold Storage Problems.
- D. Mining and Metallurgy.* (i) Malleable Iron, (ii) Economic Minerals, e.g., Magnesite, Barytes, etc., (iii) Pigments, (iv) Metals and Alloys, (v) Ores, (vi) Oil Shale.
- E. Miscellaneous.* (i) Carburetters, (ii) Power, (iii) Clays.

In addition to these investigations, the nucleus of a Bureau of Information has been established, with a library of scientific books and journals catalogued and indexed. A large amount of information has been disseminated among Government Departments, technologists, manufacturers and others vitally interested in Australian Industry.

3. *Publications.*—A list of the publications issued up to the 14th March, 1921, is given in Year Book No. 14, p. 1063, since which date the following bulletins have been issued :—(i) A Classification and detailed Description of the Barleys of Australia, (ii) A Classification and detailed Description of the Oats of Australia, (iii) The Production of Liquid Fuels from Oil Shale and Coal in Australia, (iv) The Manufacture of Pulp and Paper from Australian Woods, (v) A Classification and detailed Description of the more important Wheats of Australia, (vi) Australian Clays in the Manufacture of White Pottery Wares, (vii) Problems of the Viticultural Industry. A pamphlet has also been published on "The Co-operative Development of Australia's Natural Resources," as well as circulars on the following subjects :—(i) Weevils in Wheat Stacks, (ii) Leaks in Fruit Containers, (iii) Scientific Road-making, (iv) A Forest Policy for Australia, (v) Cotton, its Cultivation in Australia, (vi) The Water Hyacinth, (vii) New Tanning Materials. The publication of "Science and Industry," the Journal of the Institute, has been suspended since the end of 1920.

§ 6. The Commonwealth Solar Observatory.

1. *Reasons for Foundation.*—The Commonwealth Solar Observatory was established for the study of solar phenomena, for allied stellar and spectroscopic research, and for the investigation of associated terrestrial phenomena. It was founded to fill a gap in the chain of astrophysical observatories round the earth, and, with its completion, there will be stations separated by 90 degrees of longitude round the globe. Its situation in lat. 35° south places it in the unique position of being the only observatory making a feature of solar work south of the equator. It was founded chiefly for the purpose of advancing the knowledge of the Universe and the mode of its development, but also in the hope that the eventual discovery of the true relation between solar and terrestrial phenomena may lead to results which will prove of direct value to the country.

2. *History of Inauguration.*—The initial step towards the establishment of a Solar Observatory in Australia was taken on 4th March, 1907, when, as the result of a letter communicated to the press of South Australia, inquiry was made into the possibility

of the Adelaide Observatory undertaking this work. Subsequently the movement received the support of the International Solar Union, the Royal Society, the British Association for the Advancement of Science, the Australasian Society for the Advancement of Science, the Smithsonian Institution, and various other scientific bodies throughout the world, and in April, 1908, a memorandum was presented to the Prime Minister setting forth the reasons why a solar station in Australia is desirable. As the result of inquiries among the State Observatories, it was found that none of them had the necessary funds or equipment for undertaking the work. Committees for aiding in the establishment of a Solar Observatory in Australia were instituted by the British Association and by the Australasian Association for Advancement of Science.

The Committee of the last-mentioned body sent a deputation to the Minister for Home Affairs in April, 1909, and a public meeting was organized in the Melbourne Town Hall, presided over by the Governor-General, and supported by the Governor of Victoria and delegates from all the Australian Universities and Observatories. As a result of the public support which the movement had received, in December, 1909, the Prime Minister took the first official action towards the establishment of the Observatory by accepting the gift of a 9-inch refracting telescope from Mr. James Oddie, of Ballarat, and by placing on the Estimates a sum of money sufficient for the erection of a temporary building within the Federal Capital area wherein to house the telescope in order that the suitability of this site might be examined. On 19th March, 1910, a conference of surveyors at Canberra, attended also by the Government Astronomer of Victoria, and by the Commonwealth Meteorologist, recommended that Mount Stromlo should be the site of the temporary observatory.

On 8th September, 1911, the temporary observatory on Mount Stromlo being ready, Mr. Baracchi, the Government Astronomer of Victoria, was commissioned to undertake observations to test the site, and two years later he reported that it was suitable for an observatory for solar and general astronomical research. In the meantime a sum of money, which had been collected for its partial equipment, was offered to the Commonwealth Government, on behalf of the subscribers, but the offer was not at the time accepted.

In May, 1913, a memorandum by the present Director, setting forth certain aspects of Australia's participation in the International scheme of solar research, was transmitted to the Government, and, in reply, the Secretary to the Department of External Affairs stated that, when Canberra became the seat of Government, provision would be made for the establishment, amongst general scientific studies, of a section to be devoted to solar physics. In 1914, the visit of the British Association to Australia was made the occasion of a deputation of overseas Astronomers to the Prime Minister, which resulted in a conference with the Works and Railways Department to discuss the probable cost of housing, on Mount Stromlo, the apparatus which had been offered. The Government ultimately agreed to accept the donations and to arrange that observations should be conducted when times were more favourable. The matter remained in abeyance during the war and until April, 1923, when the Government decided to proceed with the establishment of the observatory. As a first step, a committee of British Astronomers was invited to act as a selection committee to choose a Director. The first Director, Dr. W. G. Duffield, was appointed as from 1st January, 1924, upon which date the Observatory came into effective existence.

3. Site of the Observatory.—The site selected for the Observatory is on Mount Stromlo, a ridge of hills about seven miles west of Canberra. The highest point is 2,650 feet above sea level, or about 700 feet above the general level of the Federal Capital City. A road has been constructed to the summit, upon which has been erected the temporary building to house the Oddie telescope. From the summit clear views are obtained in all directions. The approach to the Observatory passes the reservoir which supplies Canberra with water, and thence follows the eastern side of the ridge past several sheltered sites suitable for residences for the members of the staff, who will thus be within easy reach of the instruments to be housed on its crest.

4. Buildings.—The temporary structure for housing the Oddie telescope, which was the first building erected upon Mount Stromlo, is a concrete building, comprising a central dome 16 feet in diameter, with four rooms opening off it. A small reservoir

has been built near the summit which is fed with water pumped from the main reservoir 120 feet below. The present building programme includes separate houses for two members of the staff, quarters for five single men, and an administrative block which is being erected near the site for the laboratory and workshop. It is hoped that a contract for further buildings will be let shortly. Electric light and power have already been conveyed to the residential area and are being extended to the summit. The station is connected by telephone with the Canberra Post Office.

5. Equipment.—The bulk of the present equipment is due to the generosity of supporters of the movement in England and Australia. The gifts include a 6-inch Grubb refracting telescope, presented by the late W. E. Wilson, F.R.S., and Sir Howard Grubb, F.R.S., trustees of the late Lord Farnham, a 9-inch Grubb refractor with a 6-inch Dallmeyer lens, both presented by the late Mr. James Oddie, of Ballarat, while Mr. J. H. Reynolds, of Birmingham, has presented a large reflecting telescope with a mirror 30 inches in diameter, which will shortly reach Australia. Cash donations amounting to over £2,000 have been received, and will form the nucleus of a Foundation Endowment Fund. With these generous gifts as testimony to the value of Australia's co-operation in solar and astrophysical research, it is hoped that the Committee will liberally equip and endow the institution so that it may rank with the great observatories of the world.

6. Observational Work.—Since Mr. Baracchi and Dr. Baldwin undertook to examine the suitability of the site in 1911, the Observatory has not been used for astronomical purposes until the present year, though the building has served as a look-out station for bush fires during the summer months. The general work of the Observatory has been hampered by the non-receipt of apparatus. Pending the completion of the buildings and equipment, the bulk of the work has been carried on in temporary premises at the Hotel Canberra. The chief business has been largely administrative, but some progress has been made in the equipment of a workshop and in assembling various pieces of apparatus. Routine observations upon certain solar phenomena have been begun, and a research upon a spectroscopic phenomenon is in progress.

7. Staff.—The present staff, which is, of course, merely a nucleus, consists of the Director, two Assistants, a Research Fellow, and two mechanics.

§ 7. Department of Chemistry, South Australia.

In South Australia, a Department of Chemistry was formed in 1915. The Department is principally engaged in general routine chemical examinations and analyses in pursuance of various Acts of Parliament and for Government Departments, but the chemical investigation of local products and industries forms an important branch of its work. At first the Department issued bulletins, of which nine have been published, but since 1918 the results of investigations made have been embodied in the reports of the Advisory Council of Science and Industry of South Australia. Researches have been carried out for the Wheat Weevil Committee, and investigations have been made into the lignites at Moorlands, the utilization of grapes and surplus lemons, cold-water paints, calorific values of South Australian firewoods, charcoal and coke, kernel oil from peaches and apricots, and a survey of the tannin resources of South Australia. Further investigations into South Australian lignite are reported in the South Australian Mining Review.

§ 8. State Advisory Council of Science and Industry of South Australia.

The Advisory Council of Science and Industry of South Australia is the result of the fusion of the members of the Committee of Scientific Research and the Committee on Post-war Problems. The members of the Council, who all act in an honorary capacity, are the nominees of the different public bodies in the State, such as the Chamber of Commerce, the Chamber of Manufactures, Associated Banks, United Trades and Labour Council, Employers' Federation, etc., and include a number of Government technical officials and University professors.

For the purposes of investigation, the Council is divided into Committees, under the headings Agriculture, Pastoral, Mineral, Manufacture, Trade, Commerce, and Transport. These Committees consider and take evidence on subjects proper to their provinces, and report to the Government.

The office of the Council is attached to the Department of Chemistry, where research work is carried out at the instance of the Council, the Director of Chemistry being Vice-Chairman of the Council. Four reports have been issued for the years 1919 to 1922, and contain a summary of the work done, with reports of investigations, including the "Wheat Pests Problem," "Utilization of Surplus Lemons," "Cold Water Paint," "Calorific Values of Different Firewoods," "Peach and Apricot Kernel Oil," and a "Tannin Survey of South Australia," etc. The Council also distributed information forwarded by the Commercial and Industrial Bureau of the Board of Trade.

§ 9. Valuation of Australian Production.

1. *Value of Production.*—The want of uniformity in methods of compilation and presentation of Australian statistics renders it an extremely difficult task to make anything like a satisfactory valuation of the various elements of production. At present there is so little accurate statistical knowledge regarding such industries as forestry, fisheries, poultry, and bee-farming, that any valuation of the production therefrom can only be regarded as the roughest approximation. As a matter of fact, complete information as to value of production in all States is available in regard to the mining industry alone, and even in this case adjustments have to be made before the returns are strictly comparable. Careful estimates have been made in connexion with the value of production from the agricultural and pastoral industries, which, it is believed, in the main give fairly accurate results. The returns given in the following table for 1913 and subsequent years may be taken as substantially correct. The table hereunder shows the approximate value of the production from all industries during the years specified:—

ESTIMATED VALUE OF PRODUCTION.—AUSTRALIA, 1913 TO 1923-24.

Year.	Agriculture.	Pastoral.	Dairy, Poultry, and Bee-farming.	Forestry and Fisheries.	Mining.	Manufacturing.(a)	Total.
	£1,000	£1,000	£1,000	£1,000	£1,000	£1,000	£1,000
1913 ..	46,162	59,343	21,682	6,626	25,594	57,674	217,081
1914 ..	36,052	63,452	22,504	6,853	22,054	59,004	209,919
1915 ..	75,475	65,852	22,399	6,253	22,060	59,212	251,251
1916 ..	61,255	77,126	27,931	6,062	23,192	60,502	256,068
1917 ..	59,641	83,926	31,326	6,147	24,998	65,327	271,365
1918 ..	59,036	88,448	33,738	6,890	25,462	70,087	283,661
1919-20 ..	72,202	101,578	38,830	9,670	18,982	92,330	333,592
1920-21 ..	112,801	85,861	52,613	11,136	21,613	101,778	385,802
1921-22 ..	81,890	70,048	44,417	10,519	19,977	112,517	339,368
1922-23 ..	84,183	90,535	43,542	11,124	20,316	123,188	372,888
1923-24 ..	81,125	102,843	42,112	11,866	22,232	132,392	392,570

(a) These amounts differ from those given in Chapter XXII., Manufacturing Industry, which include certain products included under Dairy Farming and Forestry in this table.

2. *Relative Productive Activity.*—The relative output or production per head of population measured quantitatively cannot be gauged from a mere statement of the total value of production from year to year. If measured by mere value, increase of price might have the effect of making an equal production to that of a time when prices were lower, and show an increase which would, of course, be misleading. For example, the

annual figures showing the estimated value of production from Australian industries do not directly show whether there has been any increase in the *quantity* produced, since the price-level at the time is itself a factor in the determination of the values. Before, therefore, any estimate of the relative increase or decrease in production (that is, in the relative quantity of output) can be formed, the variations due to the price element must be eliminated. This is done in the following table, in which Column I. shows the estimated value of production (i) in the aggregate and (ii) per head of mean population. In Column II. the estimated value of production per head of population is shown in the form of index-numbers with the year 1911 as base; that is to say, the production per head in 1911 is made equal to 1,000, and the values for the other years computed accordingly. In Column III. production price index-numbers are given; it is assumed that these index-numbers reflect, with substantial accuracy, variations in production prices in Australia as a whole. The figures in Column IV. are obtained by dividing the figures for each year in Column II. by the corresponding figures in Column III. They show the estimated relative productive activity per head of population, taking the year 1911 as the basic or standard year, the fluctuations due to variations in prices having been eliminated.

RELATIVE PRODUCTIVE ACTIVITY.—AUSTRALIA, 1871 TO 1923-24.

Year.	I.		II.	III.	IV.
	Estimated Value of Production.		Relative Value of Production per Head (Year 1911 = 1,000).	Production Price Index-Number (Year 1911 = 1,000). (a)	Estimated Relative Productive Activity Index-Numbers (Year 1911 = 1,000). (a)
	(i) Total (000 omitted).	(ii) Per Head of Population.			
	£	£			
1871	46,700	27.46	667	1,229	543
1881	71,116	30.83	748	1,121	667
1891	96,087	29.65	720	945	762
1892	95,244	28.81	699	918	761
1894	83,773	24.45	594	749	793
1896	92,605	26.06	633	922	686
1899	112,273	30.21	733	809	906
1901	114,585	29.96	727	974	746
1902	109,615	28.29	687	1,051	654
1903	117,672	30.04	729	1,049	695
1904	122,343	30.78	747	890	839
1905	135,846	33.68	818	910	899
1906	147,043	35.94	873	948	921
1907	165,881	39.86	964	1,021	944
1908	162,490	38.39	929	1,004	925
1909	173,268	40.07	969	976	993
1910	186,788	42.21	1,021	963	1,060
1911	189,098	41.34	1,000	1,000	1,000
1912	208,404	43.91	1,062	1,074	989
1913	217,081	44.36	1,073	1,054	1,018
1914	209,919	42.22	1,021	1,256	813
1915	251,251	50.56	1,223	1,292	947
1916	256,068	52.07	1,260	1,398	901
1917	271,365	54.47	1,318	1,486	887
1918	283,661	55.83	1,351	1,583	853
1919-20	333,592	62.90	1,522	1,875	812
1920-21	385,802	71.30	1,725	1,911	903
1921-22	339,368	61.60	1,496	1,579	944
1922-23	372,888	66.19	1,601	1,753	913
1923-24	392,570	68.28	1,652	1,850	893

(a) Production Price Index-numbers are not available prior to 1908, and Wholesale Price Index numbers are substituted therefor.

The total production from all industries during 1923-24 was £392,570,000, equal to an average of £68.28 per inhabitant.

In Year Book No. 5 (page 1217) will be found the value of production in each State at decennial intervals since 1871, and for the year 1909. Details for individual States are not available for subsequent years owing to discontinuance by the Customs Department of the collection of statistics of interstate trade.

§ 10. Wealth of Australia.

1. *Methods of Estimating.*—(i) *General.* At various times estimates have been made of the wealth of Australia, and more especially of the private wealth. For this purpose three different methods have been employed—(a) The Probate method, (b) The Census method, (c) The Inventory method.

(ii) *The Probate Method.* This method consists essentially in taking account over a given period of the amount of property left by deceased persons as disclosed by probate returns, and in assuming that, in respect of wealth, those dying at each age represent a fair sample of the persons living at that age. It also involves the further assumption that the whole of a deceased person's wealth passes under review in the probate returns. If the period involved is a fairly long one, and the community is large, the first of these assumptions is probably warranted; but, owing to the large number of cases in which property passes by settlement or by gift *inter vivos*, the second assumption is rarely allowable, and the probate method of estimate is consequently unsatisfactory. It has a further disadvantage in that it requires a record over a long period of the ages of the deceased persons combined with the values of the estates subject to probate, and thus involves an elaborate inquiry to furnish a result which when obtained relates to a somewhat remote and rather indefinite past. In these circumstances it may be regarded under Australian conditions as an unreliable method.

(iii) *The Census Method.* From many points of view the census method would appear to be that which should give the most reliable results. The figures are obtained directly from the persons who should be best able to give the information—the owners of the property concerned. The results relate to a comparatively recent and specific date, thereby avoiding one of the disadvantages of the probate method. Further, the form in which the information is obtained enables a classification to be made, showing the number of persons in each wealth group. Notwithstanding these manifest advantages, the census method is not convenient to employ for the purposes of an estimate of wealth, since in normal times its inquisitorial character is objected to, and its cost is very great.

(iv) *The Inventory Method.* The inventory method has been employed for many years in the United States of America, and has been the basis of several estimates of Australian wealth. This method consists in making use of various valuations of different forms of material wealth that have been made for other purposes, and of supplementing these by estimates based on statistical data available in respect of items for which no such valuations are already in existence. The estimate when obtained relates to a specific and fairly recent point of time, and is in such form as to enable a classification to be made according to nature and locality of the items concerned.

2. *Inventory Estimates, Private Wealth, 1813 to 1921.*—(i) *Australia.*—Inventory estimates for Australia are furnished for a number of years in the following table, together with the average wealth per head of population in each case. These figures relate to

private wealth, and do not include any estimate in respect of Government or Municipal property :—

PRIVATE WEALTH, AUSTRALIA.—INVENTORY ESTIMATES, 1813 TO 1921.

Year to which Estimate Relates.	Authority.	Aggregate Amount.	Mean Population.	Average Private Wealth per Head of Mean Population.
		Million £.	Thousands.	£
1813	T. A. Coghlan	1	13	75
1838	"	26	143	182
1863*	"	160	1,233	130
1888*	"	885	2,932	302
1890	"	1,019	3,107	328
1899	"	879	3,690	238
1901	"	909	3,791	240
1903	"	982	3,893	249
1915	G. H. Knibbs	1,620	4,985	325
1921	C. H. Wickens	2,166	5,458	397

* Adjusted to allow for exclusion of New Zealand.

(ii) *Details for States, 1921.* The following table furnishes details as at 30th June, 1921, in respect of each State and Territory and for Australia as a whole :—

PRIVATE WEALTH.—INVENTORY ESTIMATE, DETAILS, 1921.

Class of Property.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Ter.	Fed. Ter.	Austra- lia.
	£1,000.	£1,000.	£1,000.	£1,000.	£1,000.	£1,000.	£1,000.	£1,000.	£1,000.
I. Land and Improve- ments	593,484	399,503	142,120	115,814	67,777	41,549	625	397	1,361,269
II. Live Stock	48,947	27,817	48,664	10,790	15,336	4,422	2,696	161	158,833
III. Agricultural, Dairying and Pastoral Imple- ments and Machin- ery	12,409	10,218	4,057	5,248	3,300	709	12	11	35,964
IV. Manufacturing Plant and Machinery	29,735	17,588	9,999	4,233	3,325	2,838	..	..	67,718
V. Mining Properties (in- cluding Plant and Machinery)	14,800	5,300	2,800	1,300	7,200	2,600	..	..	34,000
VI. Coin and Bullion	13,607	38,874	3,173	2,452	2,163	945	1	1	61,216
VII. Private Railways and Tramways	3,511	777	4,906	278	5,047	1,454	..	..	15,973
VIII. Shipping	2,970	2,793	370	756	164	186	4	..	7,243
IX. Agricultural and Pas- toral Products	24,692	17,993	11,711	8,275	5,624	2,210	3	7	70,515
X. Locally Manufactured Products	44,479	34,481	12,755	7,132	3,645	2,343	..	..	104,835
XI. Mining Products (other than gold)	1,964	111	214	148	88	132	3	..	2,660
XII. Imported Merchand- ise	31,616	23,062	11,448	7,461	5,008	3,200	59	37	81,891
XIII. Clothing and Personal Adornments	10,536	7,685	3,815	2,486	1,669	1,066	20	12	27,289
XIV. Furniture and Fit- tings, Books, Pic- tures, etc.	43,482	33,229	12,183	10,845	5,529	3,428	46	38	103,780
XV. Motor Vehicles	9,862	7,537	3,235	4,688	1,417	931	5	..	27,075
	886,094	626,968	271,450	181,906	127,292	68,013	3,474	664	2,165,861
Mean Population for 1921 (in thousands)	2,107.1	1,537.0	763.0	497.2	333.8	213.3	3.9	2.5	5,457.8
Private Wealth per Head	£421	£408	£356	£366	£381	£319	£889	£267	£397

(iii) *Details for Australia 1903, 1915, and 1921.* A comparison of the leading items for 1903, 1915, and 1921, and of the relative distribution of such items, is given in the following table :—

**PRIVATE WEALTH.—INVENTORY ESTIMATE, AUSTRALIA.
1903, 1915, AND 1921.**

Classification.	Aggregate Amount.			Relative Distribution.		
	1903 (Coghlan).	1915 (Knibbs).	1921 Wickens).	1903 (Coghlan).	1915 (Knibbs).	1921 (Wickens).
	Million £.	Million £.	Million £.	%	%	%
Land and Improvements	683.9	1,105.6	1,361.3	69.6	68.3	62.9
Live Stock	96.9	100.4	158.8	9.9	6.2	7.3
Coin and Bullion	26.1	44.4	61.2	2.6	2.7	2.8
Merchandise and Produce on hand	59.6	148.0	259.9	6.1	9.1	12.0
Household Furniture and Personal Property	43.4	91.9	163.8	4.4	5.7	7.6
Shipping	6.4	13.3	7.2	0.7	0.8	0.3
Mines and Mining Plant	32.2	41.3	34.0	3.3	2.6	1.6
Plant, Machinery, etc., not elsewhere included	33.5	74.6	119.7	3.4	4.6	5.5
Total	982.0	1,619.5	2,165.9	100.0	100.0	100.0

(iv) *Private Wealth per Head.* A comparison of the wealth per head under the principal items mentioned above is furnished in the following table :—

**INVENTORY ESTIMATE.—PRIVATE WEALTH PER HEAD, AUSTRALIA,
1903, 1915, AND 1921.**

Classification.	Average Wealth per Head.					
	1903 (Coghlan).		1915 (Knibbs).		1921 (Wickens).	
	£	s. d.	£	s. d.	£	s. d.
Land and Improvements	175	13 5	223	7 0	249	8 6
Live Stock	24	17 10	20	5 7	29	1 11
Coin and Bullion	6	13 11	8	19 4	11	4 3
Merchandise and Produce on hand	15	6 4	29	17 9	47	12 5
Household Furniture and Personal Property	11	2 9	18	11 6	30	0 3
Shipping	1	12 8	2	13 10	1	6 4
Mines and Mining Plant	8	5 5	8	7 0	6	4 7
Plant, Machinery, etc., not elsewhere included	8	12 1	15	1 3	21	18 8
Total	252	4 5	327	3 3	396	16 11

(v) *Distribution according to States and Territories.* The following table gives the distribution of the private wealth of Australia, according to the States and Territories in which it was situated. In the case of the 1903 estimate the Northern Territory was regarded as part of South Australia, and the Federal Capital Territory, not having come into being as a separate entity, was included in New South Wales :—

**PRIVATE WEALTH.—INVENTORY ESTIMATE, STATES, ETC.,
1903, 1915, AND 1921.**

State or Territory.	Estimated Private Wealth.					
	Aggregate Amount.			Per Head of Population.		
	1903 (Coghlan).	1915 (Knibbs).	1921 (Wickens).	1903.	1915.	1921.
	Million £.	Million £.	Million £.	£	£	£
New South Wales	368.8*	660.8	886.1	258*	354	421
Victoria	310.0	454.1	627.0	256	318	408
Queensland	119.5	209.6	271.4	229	305	356
South Australia	86.3†	134.0	181.9	234†	305	366
Western Australia	49.1	107.1	127.3	216	332	381
Tasmania	48.3	51.3	68.0	269	258	319
Northern Territory	†	2.0	3.5	†	442	889
Federal Capital Territory	*	0.6	0.7	*	233	267
Total	982.0	1,619.5	2,165.9	249	325	397

* Particulars for Federal Capital Territory included with New South Wales.

† Particulars for Northern Territory included with South Australia.

In all instances the figures relate to the material private wealth existing in the several States and Territories, irrespective of the domicile of the owner.

3. Estimated Value of Government and Municipal Property, 1915 and 1921.—

An estimate of the value of Government and Municipal property at any date cannot be readily obtained, but with the object of presenting a complete view of Australian wealth, a rough estimate has been prepared in respect of the years 1915 and 1921, the results of which are given hereunder :—

**GOVERNMENT AND MUNICIPAL PROPERTY.—ESTIMATED VALUE,
1915 AND 1921.**

Particulars.	1915.	1921.
<i>Commonwealth—</i>	Million £.	Million £.
Railways	6	11
Land, Buildings, and other Property	11	18
<i>State—</i>		
Railways and Tramways	202	240
Crown Lands	38	53
Buildings and other Property	100	121
<i>Municipal—</i>		
Roads and Streets	120	160
Other Property	40	54
Total	517	657

These figures indicate that the total for Government and Municipal property is about one-fourth of the aggregate wealth of Australia, public and private, a proportion which agrees approximately with estimates that have been made in the case of Great Britain.

NOTE.—As the estimates previously given, whether for public or private wealth, are in respect of the values of material objects, irrespective of ownership, the effect of public or private indebtedness does not enter into the question.

§ 11. Conspectus of Australian Life Assurance Legislation.

The accompanying table to which reference was made on page 423 of § 5. Life Assurance, in Chap. VIII., "Finance," hereinbefore, gives a conspectus of the Acts governing life assurance in each of the Australian States.

CONSPECTUS OF AUSTRALIAN

HEADINGS.	NEW SOUTH WALES.	VICTORIA.	QUEENSLAND.
1. <i>Acts in force</i> ..	Life, Fire, and Marine Insurance Act 1902, 1917	Companies Act 1915	Government Annuities and Assurance Act 1865 Life Assurance Companies Act 1901 No provision
2. <i>Officer responsible for administration of insurance legislation</i>	NOTE.—Life, Fire, and Marine Insurance Act 1902, 1917 is the only local insurance legislation. The only provisions affecting life insurance relate to—(1) Protection of policies against creditors (2) Lost policies; (3) Insurances for benefit of family	No provision	
3. <i>Registration</i> ..	.. ..	1915 Act, Section 443.—All companies commencing new life assurance business to be registered. Section 441.—Particulars of head and local office, directors, nominal, subscribed, and paid-up capital to be registered by lodging with Registrar-General memorandum in form of Eleventh Schedule. Such memorandum to be advertised	1901 Act, Section 27.—Companies legislation applies generally, subject to provisions of 1901 Act Section 17.—Foreign companies not to transact life business in Queensland until registered under British Companies Act 1886 or Foreign Companies Act 1895. Penalty on agent, £250. Policies by unregistered foreign company valid as against company; but company not entitled to recover premiums Section 4.—No company deemed to transact life business by reason only of receipt of premiums in respect of policies issued before Act or by reason only of issuing accident policies
4. <i>Deposits with Government</i>	.. ..	1915 Act, Section 444.—Before accepting premiums every life company to deposit £5,000, to be vested in Government fund indicated by company; to be retained until life assurance fund accumulated by premiums amounts to £15,000, then to be refunded	1901 Act, Section 5.—Every company commencing or transacting life assurance business to deposit either (1) £10,000 to be invested in Government securities, or (2) Government securities of value of £10,000. Such deposit to be solely security for all policy-holders Sections 5 and 6.—Company to receive income of deposit; may increase it; and withdraw excess. If securities lost, &c., Parliament to replace Section 7.—Treasurer final judge of value of securities

LIFE ASSURANCE LEGISLATION.

SOUTH AUSTRALIA.	WESTERN AUSTRALIA.	TASMANIA.
Life Assurance Companies Act 1882, 1899; Policies Protection Act 1887	Life Assurance Companies Act 1889, 1905	Life Assurance Companies Act 1874, 1885, 1889, 1906
1882 Act, Section 67.—Public trustee	1889 Act, Section 66.—Colonial Treasurer	No provision
1882 Act, Section 34.—Companies Acts apply generally to insurance companies	1889 Act, Section 34.—Companies Acts apply generally to insurance companies	<p>1874 Act, Section 7.—No company to grant policies or accept premiums unless registered under Act. Penalty on person accepting premium on behalf of unregistered company—three years or £100</p> <p>Section 4.—Memorandum in form of Schedule 1 to be lodged and advertised before registration</p> <p>Section 13.—Change of chairman, director, principal officer, or agent to be registered</p> <p>1889 Act, Section 4.—Companies not having board of directors or committee of management in Tasmania may be registered by lodging memorandum in form of Schedule</p>
<p>1882 Act, Section 4.—Companies carrying on business of life assurance within South Australia shall deposit with Public Trustee securities to value of £5,000, being either—(1) Mortgages on freehold estate in South Australia on which money advanced does not exceed two-thirds value of estate; or (2) Title deeds or certificates of real estate; or (3) Bonds, debentures, or other securities issued by Government or by a municipality, provided that a local company shall not be required to deposit more than 50 per cent. of premiums actually received until deposit amounts of £5,000</p>	<p>1889 Act, Section 4.—Every company commencing or carrying on business of life assurance shall deposit with Treasurer securities to value of £10,000, being—(1) Mortgages of freehold estate in Western Australia on which money advanced does not exceed two-thirds of value of estate; or (2) Title deeds or certificates of real estate; or (3) Bonds, debentures, treasury bills, or other securities issued by the Government or a municipality; or (4) Deposit receipt of an approved bank in Western Australia, moneys to be on fixed deposit in name of Treasurer, income to be received by company. Provided that a local company shall not be required to deposit more than 50 per cent. of premiums actually received until deposit amounts to £10,000</p>	<p>1874 Act, Section 6.—Before accepting premiums company shall deposit £5,000 with Treasurer, to be invested in approved security indicated by company. Company to receive income from deposit. Deposit returnable when life assurance fund accumulated out of premiums amounts to £15,000</p> <p>1889 Act, Section 5.—Foreign companies must make similar deposit of £5,000, but not returnable</p>
<p>Section 5.—Existing companies to make deposit within one year of Act coming into operation; future companies to make deposit within twelve months of incorporation or registration. No company to be deemed to carry on business of life assurance by reason only of receiving premiums in respect of policies issued before Act</p>	<p>Section 5.—Existing companies to make deposit within one year of Act coming into operation; future companies to make deposit within six months of incorporation or registration. No company to be deemed to carry on business of life assurance by reason only of receiving premiums in respect of policies issued before Act</p>	
<p>Section 6.—Company to send in to Public Trustee annual verified returns of amounts received and paid during the year on account of policies issued in South Australia, and (until amount deposited hereunder and under Section 4 shall amount to £20,000) to deposit securities similar to those mentioned in Section 4 to value of 25 per cent. of excess of receipts over disbursements appearing from such returns</p>	<p>Section 6.—Companies to send in to Colonial Treasurer annual verified returns of amounts received and paid during the year on account of policies issued in Western Australia; and (until amount deposited hereunder and under Section 4 amounts to £20,000) to deposit securities similar to those mentioned in Section 4 to value of 25 per cent. of excess of receipts over disbursements appearing from such returns.</p>	
<p>1882 Act, Section 7.—If securities lost, &c., Parliament to make good</p>	<p>Section 7.—If securities lost, &c., Parliament to make good</p>	
<p>Section 8.—Company may deposit further securities</p>	<p>Section 8.—Company may deposit further securities</p>	
<p>Section 9.—Company to receive income from securities, and may withdraw same on timely notice, and, where deposit compulsory, on substituting equivalent securities. Decision of Public Trustee to be conclusive as to value of securities</p>		

CONSPPECTUS OF AUSTRALIAN

HEADINGS.	NEW SOUTH WALES.	VICTORIA.	QUEENSLAND.
4. <i>Deposits with Government</i> —continued.
5. <i>Periodical returns to be made to Government</i>	<p>1915 Act, Sections 451-2.—Annual revenue accounts and balance-sheets, Schedules 13 to 16</p> <p>Section 453.—Foreign Companies.—Statement of number, kinds, and amounts of policies in force—(1) in Victoria, and (2) elsewhere—in form of Seventeenth Schedule</p> <p>Section 454.—Actuarial investigation to be made by all companies at least every five years. Abstract of actuary's report to be in form of Eighteenth Schedule</p> <p>Section 455.—Within nine months after investigation company to prepare statement of life assurance and annuity business in form of Nineteenth Schedule</p> <p>Section 456.—Governor in Council may alter forms</p> <p>Section 457.—Statements and abstract to be signed, printed, and deposited with Registrar-General</p> <p>Section 458.—Copies to be sent to shareholders, members and policy-holders in Victoria</p> <p>Section 464.—May be inspected, and, Section 465, received in evidence</p> <p>Section 489.—All deposited documents to be laid before Parliament annually</p>	<p>1901 Act, Section 9.—Life Companies.—(1) Annual revenue account, Second Schedule; (2) Annual balance-sheet, Third Schedule</p> <p>Section 10.—Companies doing life and other business.—(1) Annual revenue account, Fourth Schedule; (2) Annual balance-sheet, Fifth Schedule</p> <p>Section 11.—Every company doing Life Business.—Annual statement of policies, showing new, discontinued, and existing policies, and progress of company, Sixth Schedule</p> <p>Section 12.—Every company, at least every five years, to make actuarial investigation by actuary approved by Governor in Council, and to prepare abstract of result in form of Seventh Schedule</p> <p>Section 13.—Within nine months after investigation, statement of life and annuity business to be prepared in form of Eighth Schedule. If investigation made annually, statement to be prepared at least once every three years</p> <p>Section 14.—Governor in Council may alter forms</p> <p>Section 15.—All abstracts and statements to be signed, printed, and deposited with Registrar-General</p> <p>Section 16.—Company to send copies of all deposited documents, without fee, to every shareholder and policy-holder in Queensland</p> <p>Section 47.—Returns to be laid before Parliament</p> <p>Section 48.—And may be inspected</p> <p>Section 49.—And shall be receivable in evidence</p>
6. <i>Qualification of actuary</i>	No provision	1901 Act, Section 12.—Actuary making investigation to be approved by Governor in Council
7. <i>Separation of funds</i>	<p>1915 Act, Section 440.—Every company doing other than life assurance business to keep life assurance funds separate as security absolutely for life and annuity policy-holders. But this statutory exemption from other liabilities refers only to contracts made after the Act, unless by constitution of company such exemption already exists; and this section does not apply to contracts made by existing companies bound by deed of settlement or articles of association to pay all profits of all business to life policy-holders when liability of assured appears upon the face of the contracts.</p>	1901 Act, Section 8.—As in Victoria

LIFE ASSURANCE LEGISLATION—continued.

SOUTH AUSTRALIA.	WESTERN AUSTRALIA.	TASMANIA.
Section 10.—Securities deposited are primarily charged with local liabilities	Section 9.—Company to receive income from securities, may withdraw same on timely notice, and, where deposit compulsory, on substituting equivalent securities. Decision of Treasurer conclusive as to value of securities	
1882 Act, Section 16.—Life Companies. —(1) Annual or half-yearly revenue account in form of First Schedule.	Section 10.—Securities deposited primarily charged with local liabilities. 1889 Act, Section 16.—Life Companies. —(1) Annual or half-yearly revenue account in form of First Schedule.	1874 Act, Sections 14 and 15.—Annual revenue accounts and balance-sheets as in Victoria
(2) Annual or half-yearly balance-sheets in form of Second Schedule	—(2) Annual or half-yearly balance-sheet in form of Second Schedule	Section 16.—Foreign companies, in addition to above, statement of policies in force, Schedule 7
Section 17.—Companies carrying on life and other business.—(1) Annual revenue account, Third Schedule. (2) Annual balance-sheet, Fourth Schedule	Section 17.—Companies carrying on life and other business.—(1) Annual revenue account, Third Schedule. (2) Annual balance-sheet, Fourth Schedule	Section 17.—Every five years at least actuarial investigation to be made, and abstract of report to be made in form of Schedule 8
Section 18.—Foreign companies in addition to all other statements required, shall prepare annual statement of policies in force, Fifth Schedule	Section 18.—Foreign companies, in addition to all other statements required, shall prepare annual statement of policies in force, Fifth Schedule	Section 18.—Within nine months after such investigation, company to prepare statement of life assurance and annuity business in form of Schedule 9. If investigation made annually, such statement to be prepared at least once in every three years
Section 19.—Actuarial investigation to be made at least once every five years by actuary approved by Public Trustee. Abstract of actuary's report to be prepared in form of Sixth Schedule	Section 19.—Actuarial investigation to be made at least once every five years; abstract of actuary's report to be prepared in form of Sixth Schedule	Section 19.—Company whose head office is in United Kingdom may in lieu of above documents deposit copies of statement and abstract deposited with Board of Trade
Section 20.—Within nine months after investigation, company to prepare statement of life and annuity business in form of Seventh Schedule. If investigation made annually, this statement may be prepared at any time, but at least once every three years	Section 20.—Within nine months after investigation company to prepare statement of life and annuity business in form of Seventh Schedule. If investigation made annually this statement may be prepared at any time, but at least once in every three years	Section 20.—Governor in Council may alter forms
Section 21.—Foreign companies whose head office is in United Kingdom may, in lieu of statement (Section 20) and abstract (Section 19), deposit with Registrar of Joint Stock Companies copies of those deposited with Board of Trade	Section 21.—Foreign companies, whose head office or principal place of business is not in Western Australia, in lieu of statement (Section 20) and abstract (Section 19) may deposit copies of last statement and abstract deposited with Board of Trade in England	Section 21.—Above documents to be signed, printed, and deposited with Registrar
Section 22.—Governor may alter forms	Section 22.—Governor may alter forms	Section 22.—Copies to be sent to every shareholder, member, and policy-holder in Tasmania
Section 23.—Above documents to be signed, printed, and deposited with the Registrar of Joint Stock Companies	Section 23.—Above documents to be signed, printed, and deposited with Registrar of Joint Stock Companies	Section 28.—Deposited documents may be inspected, and (Section 29) received in evidence, and (Section 45) shall be laid before Parliament annually
Section 24.—Copies of documents deposited to be sent to every shareholder, member, and policy-holder in South Australia	Section 24.—Copies to be sent to every shareholder, member, and policy-holder in Western Australia	
Section 43.—All deposited documents may be inspected	Section 43.—Deposited documents may be inspected	
Section 44.—May be received in evidence	Section 44.—May be received in evidence	
Section 61.—And shall be laid before Parliament annually	Section 60.—And shall be laid before Parliament annually	
1882 Act, Section 19.—Actuary making investigation to be approved by Public Trustee	No provision	No provision
1882 Act, Sections 14 and 15.—As in Victoria	1889 Act, Sections 14 and 15.—As in Victoria	1874 Act, Section 3.—As in Victoria

CONSPECTUS OF AUSTRALIAN

HEADINGS.	NEW SOUTH WALES.	VICTORIA.	QUEENSLAND.
8. <i>Supervision by public officers</i>	..	No provision. See heading 5. Governor in Council may alter forms	No provision. See, however, heading 4 (Treasurer), and headings 5 and 6 (Governor in Council)
9. <i>Provisions for publicity</i>	..	See headings 3 and 5 1915 Act, Section 459.—Shareholders' address book to be kept in case of proprietary companies, and to be open to inspection by shareholders and policy-holders Section 460.—Companies not registered under Part I of Companies Act 1915 to print deed of settlement, act, or charter of incorporation, and to furnish copies to shareholder or policy-holder for a fee not exceeding 2s. 6d.	See headings 3 and 5 1901 Act, Section 28.—Proprietary companies to keep shareholders' address book, as in Victoria 1901 Act, Section 29.—Companies not registered under Companies Acts to print constitution and furnish copies for fee to shareholder or policy-holder
10. <i>Statutory standard of solvency</i>	..	1915 Act, Section 460.—Court may order company to be wound up if proved that company is insolvent Section 472.—Upon application for winding up, value of policies to be estimated according to Rule in Twentieth Schedule	No provision
11. <i>Premiums carrying liability to increase</i>	..	1915 Act, Section 474.—All documents issued by company carrying on business upon any principle involving liability on the part of the assured to pay any call, levy, or assessment in addition to the fixed premium, shall contain the following words in large type and distinctively coloured ink—"Assessment Principle. In addition to premiums, policy-holders may be liable to pay calls, levies, or assessments from time to time." Penalty £50 for every breach, payable to any person who may sue	1901 Act, Section 24.—As in Victoria
12. <i>Service of process on foreign companies</i>	..	1915 Act, Section 270.—Company formed or incorporated outside Victoria shall, within twelve months of commencing business in Victoria, register with Registrar-General name, copy of memorandum and articles of association, name and address of agent in Victoria, and situation of office. Penalty £5 per day. Registered agent to be the public officer of the company and answerable for all things required to be done by the company, and personally liable to penalties Section 270 (3).—Notice of change of agent or removal of office to be given. Notices to be addressed to registered office Section 270 (3).—Service of process at office or on registered agent to be deemed service on company Section 270 (12).—No company deemed to be carrying on business in Victoria by reason only of investing funds in Victoria	No special provision relating to insurance companies

LIFE ASSURANCE LEGISLATION—continued.

SOUTH AUSTRALIA.	WESTERN AUSTRALIA.	TASMANIA.
<p>See heading 4.—1882 Act, Section 9.—Public Trustee to be sole judge of value of deposited securities</p> <p>See heading 6.—Section 19.—Actuary making investigation to be approved by Public Trustee</p> <p>See heading 5.—Section 22.—Governor may alter forms</p> <p>See heading 2.—Section 67.—Duty of Public Trustee to secure due observance of provisions of Act</p>	<p>See heading 4.—1889 Act, Section 9.—Colonial Treasurer to be sole judge of value of deposited securities</p> <p>See heading 5.—Section 22.—Governor may alter forms</p> <p>See heading 2.—Section 66.—Colonial Treasurer charged with administration of legislation</p>	<p>No provision. See heading 5 (Governor in Council)</p>
<p>See headings 3 and 4</p> <p>1882 Act, Section 35.—Shareholders' address book, as in Victoria</p> <p>Section 36.—Unregistered companies to print deed of settlement, &c., as in Victoria</p>	<p>See headings 3 and 5</p> <p>1889 Act, Section 35.—Shareholders' address book, as in Victoria</p> <p>Section 36.—Unregistered companies to print deed of settlement, &c., as in Victoria</p>	<p>See headings 3 and 5</p> <p>1874 Act, Section 23.—Shareholders' address book, as in Victoria</p> <p>Section 24.—Company not registered under Companies Act to print deed of settlement, &c., and to furnish copies on application</p>
<p>No provision</p>	<p>No provision</p>	<p>No provision</p>
<p>No provision</p>	<p>No provision</p>	<p>No provision</p>
<p>1882 Act, Section 25.—Every foreign company before doing business in South Australia, shall appoint, in writing, a resident general agent upon whom all process may be served. Such writing to contain agreement on part of company that service on agent of same validity as service on company</p> <p>Section 26.—Copy of such writing to be filed</p> <p>Section 27.—Agency to continue as long as any liability outstanding in South Australia, and not to be revoked until another agent duly appointed</p> <p>Section 28.—Service of process notice, &c., upon agent deemed sufficient service upon principal</p> <p>Section 29.—No person to act as general or other agent of foreign company until he has complied with all requirements of Act. Penalty for acting without such compliance and for procuring payment of premiums, &c., by fraudulent representations, not exceeding £250 for each offence</p> <p>Section 30.—Contracts made by foreign company without complying with Sections 25-29 valid and binding on company, but agent liable to penalty of Section 31 (? Section 29), and company neglecting to appoint and keep appointed an agent shall not recover premiums, &c., from residents of South Australia</p> <p>Sections 31 and 32.—See heading 29</p>	<p>1889 Act, Sections 25-32.—Identical with corresponding sections of South Australian 1882 Act</p>	<p>No special provision relating to insurance companies</p>

CONSPECTUS OF AUSTRALIAN

HEADINGS.	NEW SOUTH WALES.	VICTORIA.	QUEENSLAND.
13. <i>Special protection of local policy-holders</i>		<p>1915 Act, Section 445 (1).—Company may register as (1) having, (2) not having, secured local assets</p> <p>Section 445 (2).—Company registered as not having secured assets may register as having secured assets</p> <p>Section 447.—Registered secured assets primarily charged with local liabilities. Misapplication of such assets declared a breach of trust and a misdemeanour. Penalty, three years or £500</p> <p>Section 448.—Local assets of foreign companies primarily charged with local liabilities</p>	No provision
14. <i>Protection of policies against creditors</i>	<p>1902 Act, Section 4; 1917 Act, Section 2.—Property and interest of any person in policy on own life or on life of other person in whose life he is interested, and property and interest of his personal representatives in such policy, shall be exempt from bankruptcy laws and from seizure under any process, and shall not on the death of such person be assets for the payment of his debts unless he otherwise directs in his will</p> <p>Section 5.—No protection until policy has endured for two years; after two years, £200 protected; after five years, £500 protected; after seven years £1,000 protected; after ten years, £2,000 protected</p> <p>Section 6.—Policy for annuity or contributions made toward the same not protected until payments have extended over six years, or unless such policy was purchased six years prior to commencement of annuity, and such annuity does not exceed £104 per annum</p> <p>Section 7.—Protection, in case of annuity, accrues only to benefit of actual annuitant, and only to part payable after age 50. In case of endowment, only for benefit of nominee. In case of life insurance, only for benefit of personal representatives of insured, and in no case for any assignee of insured</p> <p>1917 Act, Section 3.—A policy for life assurance of a person dying on war service or two years after ceasing to be so engaged from illness or injuries caused through war service, shall be deemed to have been and shall be protected to the extent of £2,000, whatever may be the time which such policy has endured</p>	<p>1915 Act, Section 476 (1).—Interest of assured in policy on own life to extent of £1,000 not liable to execution or in insolvency</p> <p>Section 476 (2).—But, upon insolvency within two years from date of policy interest of assured liable. Provided that he or person authorized by him may purchase interest up to £1,000 by paying to trustee actual amount of premiums paid in respect of such interest</p> <p>Section 476 (3).—Upon death, interest in whole life policy completely protected against debts unless particularly and expressly made liable by will; but if death occurs within four years of date of policy such interest liable to debts to extent of sum equivalent to premiums paid in respect of excess over £1,000</p> <p>Section 476 (4).—Interest in endowment policies protected upon death to extent of £1,000 unless particularly and expressly made liable by will</p> <p>Section 476 (5).—Voluntary settlements of policies protected to same extent as policies</p> <p>Section 476 (6).—Special provision for procedure in insolvency when policy exceeds £1,000</p>	<p>1901 Act, Section 18.—Interest of assured in policy on own life not to be made available for payment of debts by any judgment order or process of any Court, and not to pass to trustee upon insolvency. After death, policy moneys protected against debts and against executor's retainer, except in case of—(1) contract or charge made by assured during his life; (2) express direction in will that policy moneys shall be applied to pay debts. Direction to pay debts, charge of debts on whole or part of estate, trust for payment of debts, not deemed such an express direction. But if assured dies within three years of date of policy, amount of premiums paid, with 5 per cent. interest, shall be available for debts. And when premiums cease in less than seven years, this section not to apply (except in case of death) until policy has endured for at least three years</p>

LIFE ASSURANCE LEGISLATION—*continued.*

SOUTH AUSTRALIA.	WESTERN AUSTRALIA.	TASMANIA.
<p>1882 Act, Section 10.—Securities deposited to be primarily charged with local liabilities</p> <p>Section 11.—Foreign company to keep separate account of local life business and of local assets. If company becomes bankrupt, or is wound up, entire local assets primarily charged with local liabilities</p> <p>Section 13.—Person committing breach of Section 11—(1) Deemed guilty of breach of trust; (2) Liable to replace amount misapplied; (3) Liable to penalty of three years or £500</p> <p>Section 12.—Foreign company adjudged bankrupt or ordered to be wound up elsewhere than in South Australia may be wound up, as regards local assets and liabilities, upon application of any policy-holder or shareholder. Proof of foreign bankruptcy or winding-up order shall be conclusive evidence that company unable to pay its debts</p>	<p>1889 Act, Sections 10-13.—Identical with corresponding sections of South Australian 1882 Act</p>	<p>1874 Act, Section 8.—Company to be registered either as having or as not having secured local assets</p> <p>Section 9.—Secured assets may be increased</p> <p>Section 10.—Registered secured assets primarily charged with local liabilities. Misapplication of such assets declared a breach of trust and a misdemeanour. Penalty, three years or £500.</p> <p>Section 11.—Local assets of foreign company primarily charged with local liabilities. If foreign company becomes bankrupt or is ordered to be wound up abroad, company may, as regards Tasmanian assets and liabilities, be wound up in Tasmania; proof of foreign bankruptcy or winding-up to be conclusive evidence that company unable to pay its debts</p>
<p>Policies Protection Act 1887.—Section 3.—Subject to limitations in Section 4, no policy on his own life made <i>bona fide</i> by any person shall be available by execution or upon insolvency for his debts during his lifetime, or on his death unless expressly mentioned and specially directed by will; but such policy shall be his absolute property, and, on death (subject to any disposition made during his life) shall be held in trust for legatee or for persons entitled upon intestacy</p> <p>Section 4.—No policy shall be protected (1) except to extent of interest and property of assured; (2) nor unless has endured for at least two years; (3) and not more than £2,000 to be protected in respect of one assured person. Policies on life of one person obtain protection in sequence, commencing with oldest</p>	<p>Life Assurance Companies Act 1905, Section 2.—Property and interest of assured in policy on his own life not to be available for his debts during his lifetime or after his death save by virtue of contract or charge made in lifetime or express direction in will. Direction to pay debts, charge of debts on whole or part of estate, trust for payment of debts, not deemed such a direction. But if assured dies within three years of date of policy, sum equivalent to premiums paid with interest at 5 per cent. shall be available for debts. Protection not to apply, except in case of death, until after two years, and to apply only to policies, premiums on which are payable during lifetime of assured or during ten years at least, and by equal instalments at intervals of not more than a year</p>	<p>1885 Act, Section 4.—Property and interest of person in policy on own life to extent of £1,000 and bonuses not to be available for debts. But if such person becomes bankrupt within two years of date of policy, the policy shall pass to his trustee, and if he dies within two years, sum equal to amount of premiums actually paid shall be available for debts</p> <p>Section 5.—Where there are two or more policies assuring more than £1,000 in the whole, holder or personal representatives to elect to which policy or parts of policies protection shall apply. In default of such election within fourteen days after notice, person who would be entitled but for such protection shall elect and may have his title registered accordingly</p> <p>Section 6.—Title to policy—(1) by bankruptcy, or (2) under will or intestacy, or (3) under writ of execution, may be registered with the company in the assignation register-book; officer to endorse upon policy memorandum of title in form in Schedule</p> <p>Section 7.—If company refuses to register title, Judge may compel</p> <p>Section 8.—Company discharged from all liability arising from compulsory registration</p> <p>Section 9.—Company not to be affected by notice of unregistered dealings</p>

CONSPECTUS OF AUSTRALIAN

HEADINGS.	NEW SOUTH WALES.	VICTORIA.	QUEENSLAND.
15. <i>Limitation of contestability of policies</i>	.. .. .	No provision	1901 Act, Section 4.—Contains a definition of indefeasible policy, a policy which upon its face and in accordance with a recited contract states that neither it nor bonus additions, &c., to it nor any interest in it shall in any way during currency be capable of being assigned, sold, encumbered, surrendered, disposed of, or in any way diminished or impaired Section 41.—No assignment or transfer of such policy to be registered. Company shall at all times during and after termination of currency of such policy (subject to provision for payment of premiums out of surrender value—Section 22) be liable for full amount of policy and bonuses, &c., until duly discharged from such liability according to law
16. <i>Lost policies</i> ..	1902 Act, Section 11.—If policy lost or destroyed, company may, upon such evidence as it deems sufficient, issue a special policy. If company fails to do so within two months after request in writing, Judge may direct issue Section 12.—Advertisements to be published at expense of applicant Section 13.—Special policy to be available for same purposes as original. To be similar to original, and to state why it is issued. Issue to be entered in books of company. After issue company not to be liable under original policy if no notice of assignment thereof has been received prior to such issue	1915 Act, Section 488 (1).—Upon evidence deemed sufficient by company, company may issue special policy containing copy of original; if company fails to issue within one month, Supreme or County Court may direct issue of special policy. Reasons for issuing to be stated on special policy and in books of company. Special policy to be available for all purposes as original. One month's notice to be given by advertisement before issuing. Applicant to bear all expenses and costs. After issue of special policy company not to be liable under original policy if no notice of assignment thereof has been received Section 488 (2).—Similar provisions for loss of special policy	1901 Act, Section 44.—As in Victoria, save that advertisements required only where amount of policy is over £50, and that application cannot be made to Court until after six months after company has failed issue special policy
17. <i>Payment of claims without probate or letters of administration</i> ..	.. .. .	1915 Act, Section 477.—When policy on deceased's life for not more than £200, company may, after three months, pay amount and bonuses to widow or widower or next of kin without probate or letters of administration	1901 Act, Section 39.—Where policy moneys not exceeding £300 exclusive of profits are payable to personal representative of deceased, company may pay without probate or letters of administration, to husband, wife, father, mother, child, brother, sister, nephew, or niece of deceased, or to any person who proves that he is entitled under statutes of distribution or entitled to take out probate or letters of administration. Such payment discharges company. Company may require bond for due application of moneys
18. <i>Assurances on lives of minors*</i>	No provision	1901 Act, Section 20.—Minor aged sixteen or upwards may insure own life with full rights of policy-holder, except that cannot assign

* Life Assurance Companies Act 1905 (Commonwealth) prescribes amount

LIFE ASSURANCE LEGISLATION—continued.

SOUTH AUSTRALIA.	WESTERN AUSTRALIA.	TASMANIA.
No provision	No provision	No provision
<p>1890 Act, No. 725, Section 2.—When policy lost or destroyed, company may issue special policy upon statutory declaration of the facts. Company must be satisfied of truth of declaration and of <i>bona fides</i> of transaction</p> <p>Section 3.—If company fails to issue special policy within one month after written request, Judge of Supreme Court may direct company to issue</p> <p>Sections 4-9.—Special policy to be similar to lost policy; to be noted with reasons for issue in company's books; to be available for same purposes as original policy; to be issued only after advertisements, applicant to pay costs and expenses; costs not to exceed £2</p> <p>Section 10.—Original policy, if found, to be cancelled</p> <p>Section 11.—Substituted special policies may be issued if special policy lost or destroyed</p>	<p>1889 Act, Section 67.—When any policy or instrument required to be registered or be produced for any registration is lost or destroyed, manager of company may, upon such evidence and subject to such conditions as he shall think fit, issue certified copy of such policy, and may, upon such conditions as he shall see fit, effect registration notwithstanding such loss or destruction</p> <p>1905 Act, Section 4.—Substantially as in Victoria, save that advertisements required only where amount of policy is over £100, and that application cannot be made to Court until after six months after company has failed to issue special policy</p>	<p>1906 Act, Section 4.—Where policy lost or destroyed, company may upon such evidence as it deems sufficient, issue a special policy. Judge may order issue if company fails to issue within two months after request in writing</p> <p>Section 5.—Special policy to be similar to lost policy and to state reasons for issue</p> <p>Sections 6 and 7.—Advertisements to be published, policy-holder to bear costs and expenses unless Judge otherwise orders</p> <p>Section 8.—Fact of issue and reasons therefor to be entered in books of company</p> <p>Section 9.—Special policy to be available for all purposes, and original policy to be null and void</p> <p>Section 10.—If special policy lost or destroyed, substituted special policy may be issued</p>
<p>1882 Act, Section 62.—Where policy for sum not exceeding £200, if no probate or letters of administration taken out within three months after death, company may pay to widow or adult child</p>	<p>1889 Act, Section 61.—Where policy for sum not exceeding £200, if no probate or letters of administration taken out within three months of death company may pay amount to widow or adult child</p>	<p>1874 Act, Section 30.—Upon death of holder of policy on own life for sum not exceeding £250 (1889 Act, Section 3), if no probate or letters of administration be taken out within three months, company may pay to widow or adult child</p>
No provision	No provision	No provision

payable, person to whom payable, and conditions re certificates of death.

CONSPECTUS OF AUSTRALIAN

HEADINGS.	NEW SOUTH WALES.	VICTORIA.	QUEENSLAND.
19. <i>Industrial assurance</i>	..	No provision	1901 Act, Section 25.—Industrial policies not to be forfeited as against assured by reason of default in payment of premium until after—(a) Service of notice stating amount due or payable and stating that, in default of payment within reasonable time (not less than 30 days) at specified place policy will be forfeited; and (b) Default in payment in accordance with notice Industrial policy defined.—One policy only issued on any one life for amount less than £100 with premiums payable at intervals of less than three months, or contracted to be received or actually received by means of collectors
20. <i>Transfer of policies from company's register in one country to another register</i>	..	1915 Act, Sections 482-6.—May be made, if company think fit, at request of policy-holder. Policies to be treated in Victoria as if insured in the country in which registered. Policies for the time being on the Victorian register of any company to be treated as being in force in Victoria and as being Victorian liabilities of the company	1901 Act, Section 46.—May be made on request of policy-holder and with consent of company. Policies transferred from Queensland register cease to be subject to laws of Queensland. This section is retrospective Section 45.—Policies on Queensland register to be treated as Queensland assets of policy-holders and as Queensland liabilities of company, and to be subject to laws of Queensland
21. <i>Provisions for obviating or deferring forfeiture of policies</i>	..	See heading 25	1901 Act, Section 22.—No policy to lapse while premiums and interest due can be paid out of surrender value as calculated in accordance with answer to ninth question in Eighth Schedule Section 23.—When last day of grace for paying premium falls on Sunday or holiday, premium to be payable on next following day not being Sunday or holiday See also headings 19 and 25
22. <i>Assignment of policies</i>	..	1915 Act, Section 478.—To be by memorandum in statutory form (Twenty-second Schedule), endorsed, on policy signed by transferor and transferee; assignment not valid until registered by company after notice given to company. Upon registration assignee may sue in own name and give discharge. Memorandum duly registered to be conclusive evidence of registration Section 478 (2).—Such memorandum to be conclusive evidence that transferee is absolute owner free from trusts, &c.; company not concerned to inquire into circumstances or consideration of transfer or to see to application of purchase money, or (save as hereafter) to be affected by notice of any trust, &c. Section 479.—Mortgage or trust of policy to be effected by separate instrument and no notice thereof to be entered on policy or transfer. Company not to be affected by express, implied, or constructive notice of any mortgage or trust Section 480.—But company not protected against mortgage, trust, &c., if (1) not acted in good faith, or (2) received express notice in writing. Upon receipt of notice may pay into Court	1901 Act, Section 41.—No assignment valid unless in form of Schedule 11 and registered. Memorandum of transfer to be endorsed on policy and registered within 60 days in special book kept by company. Date of registration to be marked on policy. Transferee has all powers and liabilities of transferor and may sue in own name; but, in case of mortgage, transferor and transferee must join in suing, unless Court otherwise orders. Receipt of transferee a sufficient discharge to company. Production of policy endorsed as above to be conclusive evidence of registration and date thereof. No assignment of an indefeasible policy shall be registered, and company shall be always liable thereon until discharged by law; but Section 22 (<i>re</i> payment of premiums out of surrender value) applies to such a policy. See heading 15 Section 42.—Mortgage or trust to be by separate instrument. No notice thereof to be entered on policy (save so far as necessary in "consideration" column of statutory form of assignment for purposes of stamp duty). Company not affected by any notice—express, implied, or constructive—of any mortgage or trust, even though mentioned in memorandum of transfer

LIFE ASSURANCE LEGISLATION—continued.

SOUTH AUSTRALIA.	WESTERN AUSTRALIA.	TASMANIA.
No provision	No provision	No provision
<p>1899 Act, Section 12.—A policy on South Australian register to be governed in all respects by the laws of South Australia; but, if company thinks fit, may be transferred to register of company in another country and thereafter shall be treated in South Australia in all respects as a policy, issued in that other country, and, in particular, shall be treated in South Australia as governed by laws of such country with regard to assignments and protection from creditors</p> <p>Section 13.—A policy may be transferred to South Australian register: policies so transferred to be governed by law of South Australia</p> <p>Section 14.—Company to prescribe mode of transfer</p> <p>Section 15.—Policies on South Australian register to be South Australian liabilities</p> <p>1882 Act, Section 47.—Every life assurance society to declare the surrender value at which it becomes bound to accept its policies. No policy shall lapse to the society for non-payment of premiums so long as premiums and interest in arrear are not in excess of the surrender value</p>	<p>1890 Act, Section 68.—All policies for the time being on the local register shall be treated as local assets and liabilities of the company on whose register they are, and be subject in every respect to the laws of Western Australia</p> <p>Sections 69–70.—Transfers of policies may be made at request, in writing, of policy-holder and with consent of company. Policy transferred from local register to cease to be subject to local laws</p> <p>1880 Act, Section 47.—Every life assurance society to declare the surrender value at which it becomes bound to accept its policies</p>	No provision
<p>1882 Act, Section 64.—Assignment may be made by endorsed memorandum of transfer in form of Tenth Schedule. No assignment to be valid until registered</p> <p>Section 65.—Notice of assignment to be given to company. Assignment to be registered in special book and date of registration to be inserted in the memorandum, which shall be signed by officer of company. Thereafter assignee may sue in own name and give valid discharge. Memorandum so signed to be conclusive evidence of registration and of date thereof</p> <p>Section 66.—Mortgage or trust to be by separate instrument. No notice thereof to be entered on policy. Company not to be affected by express, implied, or constructive notice of mortgage or trust, or to be concerned to see to application of policy moneys</p>	<p>1889 Act, Section 63.—Assignment may be by memorandum endorsed on policy in form of Tenth Schedule. No such assignment to be of any validity until registered</p> <p>Section 64.—Notice of such assignment shall be given to company and registered in special book. Date of registration to be inserted in memorandum, which shall be signed by company's officer. Thereafter assignee may sue in own name. Memorandum so signed to be conclusive evidence of registration and of date thereof</p> <p>Section 65.—Mortgage or trust to be effected by separate instrument. No notice thereof to be entered upon policy. Company not to be affected by express, implied, or constructive notice of any mortgage or trust, or bound to see to application of moneys</p>	<p>1874 Act, Section 41.—Assignment may be by memorandum of transfer endorsed on policy in form of Schedule 12. No assignment of any validity until registered. Notice of assignment to be given to company. Assignment to be registered in special book kept by company; date of registration to be inserted in memorandum, which shall be signed by officer of company; then assignee may sue in own name. Memorandum so signed shall be conclusive evidence of registration and of date thereof</p> <p>Section 42.—Mortgage or trust to be effected by separate instrument; no notice thereof to be indorsed on policy. Company not to be affected by express, implied, or constructive notice thereof, or to be concerned to see to application of policy moneys</p> <p>1885 Act, Section 6.—Title to policy by bankruptcy, &c., may be registered. See heading 14</p> <p>Section 7.—If company refuses to register assignment, judge may compel</p> <p>Section 8.—Registration so effected shall discharge company from all liability for consequences thereof</p>

CONSPECTUS OF AUSTRALIAN

HEADINGS.	NEW SOUTH WALES.	VICTORIA.	QUEENSLAND.
22. <i>Assignment of policies—continued.</i>	.. .. .	.. .. .	1901 Act, Section 43.—Company need not see to application of policy moneys
23. <i>Married women</i>	1902 Act, Sections 8 and 9 of this Act with Section 13 of the New South Wales Married Women's Property Act 1893 are equivalent to Section 11 of English Act 1882 Section 10.—Subject to the provisions of any policy referred to in Section 8, the person effecting such an insurance shall have power to appoint shares to be taken by beneficiaries. In default of such appointment, children shall take equal shares; if wife or husband is a beneficiary, she or he shall take whole for life and children equal shares in remainder	Married Women's Property Act 1915, Section 14.—Married women may insure own or husband's life for separate use. Policy of husband or wife on respective lives may be reserved in trust for the other and for children; protected against creditors, except in case of fraud. Insured may appoint original and new trustees. Payable to trustee; if no trustee, to legal representative. Court may, if necessary, appoint trustee, under Trustees Act. Receipt of trustee, or, in absence of trustee, of legal personal representative of insured to be discharge to company	1901 Act, Section 19, is equivalent to Section 14 of Married Women's Property Act (Victoria) 1915; but, while Victorian provision applies only to policy on own or husband's life, Queensland Act adds "any life wherein she has an insurable interest"; and special provision that such policy enjoys the protection against creditors given by Section 18; and when policy is in fraud of creditors, they are entitled not only to amount equal to premiums paid, but also to 5 per cent. simple interest thereon
24. <i>Insurable interest</i>	14 Geo. III. c. 48. —As in Victoria	Instruments Act 1915, Sections 119-122.—No insurance to be made on life or other event (1) unless insured has an interest; or (2) by way of gaming or wagering. Assurances made contrary to section to be void. No insurance on life or other event to be made without inserting name of person interested or for whose use or on whose account policy made. No more to be recovered from insurer than the value of interest of insured in life or other event	No information
25. <i>Misstatement of age</i>	.. .. .	1915 Act, Section 475.—Does not avoid policy unless made in bad faith and with intention to deceive; sum payable to be reduced to what, allowing for proper premiums and bonuses, would have been payable if age truly stated	I. Understatement. — 1901 Act, Section 21.—No policy to be declared void by a company by reason only of understatement of age; but company may either (1) reduce amount payable under policy in proportion fixed by comparing premiums paid with proper premiums; or (2) accept payment of difference between premiums paid and proper premiums with 5 per cent. compound interest, upon assured undertaking to pay proper premiums in future. When policy three years old, burden on company to prove that age was not correctly stated. Rights under Section 5 Life Assurance Act 1870, are saved. This section provided that age shall be deemed to be admitted by company after three years, except in case of fraud II. Overstatement.—Section 26.—Upon proof to company of overstatement, company at option shall—(1) increase amount payable in proportion to overpayment of premiums; or (2) repay amount overpaid

LIFE ASSURANCE LEGISLATION—*continued.*

SOUTH AUSTRALIA.	WESTERN AUSTRALIA.	TASMANIA.
<p>Married Women's Property Act 1883, Section 11.—As in Victoria</p>	<p>Married Women's Property Act 1892, Section 11.—As in Victoria</p>	<p>1885 Act, Section 9.—Except in case of fraud, company not to be affected by notice of any interest whatsoever except such as shown by indorsed and registered memorandum of transfer or registered title under 1885 Act</p> <p>1885 Act, Section 3.—General provisions of the Married Women's Property Act 1883 are applied to policies standing in name of a married woman</p> <p>Section 11 of Married Women's Property Act 1883 (Tasmania) is same as Section 14 of corresponding Victorian Act 1915</p> <p>1885 Act, Section 3, also provides that the fact that, at commencement of Act, a policy is standing in sole name of a married woman shall be sufficient <i>prima facie</i> evidence that she is beneficially entitled to it for her separate use</p>
<p>No information</p>	<p>No information</p>	<p>No information ..</p>
<p>No provision</p>	<p>No provision</p>	<p>No provision</p>

CONSPECTUS OF AUSTRALIAN

HEADINGS.	NEW SOUTH WALES.	VICTORIA.	QUEENSLAND.
26. <i>Payment into Court where title is in doubt</i>	..	1915 Act, Section 480.—Upon receipt of notice of any trust, right, &c., of any person, company may pay policy moneys into Supreme Court. Such moneys to be paid out to such person as Court may order.	1901 Act, Section 40.—As in England.
27. <i>Amalgamation of companies or transfer of business</i>	..	1915 Act, Section 461.—Application to be made to Court after fourteen days notice by advertisement in <i>Government Gazette</i> . Court may confirm proposed arrangement, if, after hearing directors and other persons, satisfied that no sufficient objection has been established. Following documents to be posted so as to be delivered fourteen days before day of application to (1) each policy-holder of both companies in case of amalgamation, or (11) each policy-holder of transferred companies in case of transfer—(a) a notice of application; (b) statement of nature of amalgamation or transfer; (c) abstract containing the material facts embodied in agreement or deed of amalgamation or transfer; (d) copies of actuarial or other reports upon which such agreement or deed is founded. Agreement or deed to be open for inspection for period of fifteen days after issuing above abstract. Court not to sanction amalgamation or transfer in case of dissent by policy-holders representing one-fifth or more of total amount insured in any amalgamating company or in a transferred company. No amalgamation or transfer of company transacting life business to take place unless confirmed by Court. Section 462.—When amalgamation or transfer takes place the combined company or the purchasing company (as the case may be) shall within ten days of completion of amalgamation or transfer deposit with Registrar-General certified copies of—(a) statements of assets and liabilities of the companies concerned; (b) statement of nature and terms of amalgamation or transfer; (c) agreement or deed affecting same; (d) actuarial or other reports upon which agreement or deed is founded. Declaration Verifying payments, &c., also to be filed. Section 463.—Abandonment of claim on one company and acceptance of substituted liability of other company not to be inferred from payment of premiums to other company or from other acts unless such abandonment or acceptance is signified in writing signed by policy-holder or his authorized agent.	1901 Act, Sections 30-32.—As in Victoria, with following modifications: Documents to be posted so as to be delivered 30 days before day of application. Court may grant application (for amalgamation, &c.) if satisfied that the subject-matter of the application has already been sanctioned by the Supreme Court of any part of His Majesty's Dominions where substantially the same proceedings are prescribed by law as those prescribed by this Act.
28. <i>Winding up</i>	..	1915 Act, Section 469.—Winding up may be ordered upon petition of five or more policy-holders or shareholders upon proof that company is insolvent. Contingent and prospective liabilities to be taken into account in determining whether company is insolvent. Petition not to be heard until security for costs given and <i>prima facie</i> case established. Where proprietary company has uncalled capital of amount sufficient with future premiums to make up actual invested assets equal to estimated liabilities, Court shall suspend proceedings to enable call to be made; if sufficient amount not thereby realized, Court to make an order as if company proved insolvent. Section 470.—Where the business of one company has been transferred to another company, Court may order the former (subsidiary) company to be wound up with the latter (principal) company, regard being paid to the rights of members of the several companies among themselves and to the arrangements between the companies. Subsidiary company not to be so wound up unless, after hearing objections, Court is of opinion that the company is subsidiary, and that such winding up is just and equitable. Section 471.—Where company proved insolvent, Court may, subject to just terms and conditions, reduce amount of contracts instead of making winding-up order. Section 472.—In winding up a company, policies to be valued by rule in Twentieth Schedule.	1901 Act, Sections 33-36.—Application to be by ten or more policy-holders whose policies have subsisted for at least one year, or by shareholders of the company assured to at least £1,000 in the aggregate. Otherwise, provisions as in Victoria.

LIFE ASSURANCE LEGISLATION—*continued.*

SOUTH AUSTRALIA.	WESTERN AUSTRALIA.	TASMANIA.
No provision	No provision	No provision
1882 Act, Sections 37-41.—As in Victoria	1889 Act, Sections 37-42.—As in Victoria	1874 Act, Sections 25-27.—As in Victoria
1882 Act, Sections 49-58.—As in Victoria	1889 Act, Sections 49-57.—As in Victoria. Section 58.—When company is being wound up, the official liquidator, in case of all persons appearing by the books of the company to be entitled to or interested in policies granted by the company, is to ascertain the values of such policies, and give notice of such values to such persons : any person to whom notice is so given shall be bound by the value so ascertained, unless he give notice of his intention to dispute such value in manner and within a time to be prescribed by a rule or order of the Court	1874 Act, Sections 33-6.—As in Victoria

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HEADINGS.	NEW SOUTH WALES.	VICTORIA.	QUEENSLAND.
23. <i>Penalties</i>		<p>1915 Act, Section 466.—Default in complying with Act continued for three days after notice by Registrar-General or any person interested, £50 per day during which default continues. If registered company continues in default for three months after notice by Treasurer, duly advertised, Court may order winding-up upon application of one or more policy-holders or shareholders</p> <p>Section 467.—False statements, &c., three years or £100</p> <p>See also under heading 13</p>	<p>1901 Act, Section 50.—Default in complying with Act, £50 per day on company and every person acting as director, manager, or agent—all severally liable. Default by registered company for three months; winding up as in Victoria</p> <p>Section 51.—Penalties recoverable before justices, who may direct part to be applied to costs; subject to such directions, penalties to be paid into Treasury</p> <p>Section 17.—Penalty on officers, &c., unregistered foreign company, £250</p> <p>See also heading 3</p>

LIFE ASSURANCE LEGISLATION—continued.

SOUTH AUSTRALIA.	WESTERN AUSTRALIA.	TASMANIA.
<p>1882 Act, Section 13.—Misapplication, &c., of local assets of foreign company. See heading 13</p> <p>Sections 29-30.—Non-compliance with Act by foreign company. See heading 12</p> <p>Section 31.—Company making default in complying with Act not only liable to penalties of Section 44 (? Section 45), but may also, if default has continued for three months, be prohibited from transacting local business either absolutely or for a time, as Governor may think fit</p> <p>Section 32.—Such prohibition to be advertised. Penalty for breach of prohibition, on company and agent respectively, £250</p> <p>Section 45.—Continued default for seven days after notice by Registrar or person interested, £50 per day during which default continues; in case of foreign company, general agent liable as well as company; in case of registered company, if default continues for three months after notice by Treasurer duly advertised, Court may order winding up upon application of one or more policy-holders or shareholders</p> <p>Section 46.—False statements, &c., three years or £500</p>	<p>1889 Act, Section 13.—Misapplication, &c., of local assets of foreign companies—amount to be replaced. Penalty: three years or £500</p> <p>Section 31.—If it be made to appear to Governor that default in complying with Act has continued for three months, then, in addition to penalties of Section 44 (? Section 45), Governor may prohibit company from transacting business within Western Australia, either absolutely or for a time</p> <p>Section 32.—Such prohibition to be advertised. Company or agent acting in contravention of prohibition liable respectively to penalty of £250</p> <p>Section 45.—Default in complying with Act continued for seven days after notice by Registrar or any person interested involves penalty of £50 per day; foreign companies' agent liable as well as company; registered companies—Court may order winding up upon three months' continuance of default after duly advertised notice by Colonial Treasurer</p> <p>Section 46.—False statements, &c. Penalty three years or £500</p>	<p>1874 Act, Section 7.—Accepting premiums for unregistered company three years or £100</p> <p>Section 30.—Continued default in complying with provisions of Act, for three days after notice, £50 per day. Registered company, if default continues for three months after duly advertised notice by Treasurer, company may be wound up upon application of one or more policy-holders or shareholders</p> <p>Section 31.—False statements, &c., three years or £100</p> <p>1889 Act, Section 6.—Soliciting, accepting, or receiving from any person resident in Tasmania any proposal to become a policy-holder, or to effect an assurance upon the life of any person in Tasmania in an unregistered company, three years or £100</p> <p>See also heading 13, 1874 Act, Sections 8 and 10</p>

CHAPTER XXVII.

STATISTICAL ORGANIZATION AND SOURCES OF INFORMATION.

§ 1. General.

1. Development of Australian Statistics.—(i) *Crown Colony Blue Books*. The statistical organization of the Australian States owes its origin to the "Blue Books" which in the Crown Colony days were prepared annually for the information of the Colonial Office, London. These documents were intended rather for administrative purposes than as records of statistical data, but their use in this latter respect has in many cases been quite as important as their primary purpose.

The account of the growth and progress of an infant colony furnished by a series of these Blue Books is highly informative, and although some matters of great importance were left untouched, or treated insufficiently, the limited range of economic activities was usually fairly covered, and an interesting index of material development was furnished.

Apart from their specific utility, these Blue Books served the purpose of a basis on which the later statistical publications were fashioned, and they thus furnished for the British Empire an element of uniformity in the matter of statistical compilation.

(ii) *Statistical Registers*. Following the advent of Responsible Government which was granted during the period 1851–60 to all the Australian States except Western Australia—and to that State in 1890—the "Blue Book" was succeeded by a publication which in all cases was known as the "Statistical Register." In many respects this was the old Blue Book in a new guise. The information contained was in most cases a summary of the more important data obtainable as by-products from the activities of the various administrative departments of the Government. Gradually, however, statistical consciousness emerged, and the necessity for special effort in the compilation of such data was realized. The most important of the early evidences of definite statistical effort was the taking of the population Censuses which in all the States were initiated under the Crown Colony regime. This for long furnished the sole example of extensive governmental organization for a purely statistical purpose; in practically all other cases the statistics were by-products. The growing need for quantitative data concerning the progress of the several young communities of Australia led to improvement in the methods of statistical record, and gradually to the recognition of an officer of the public service whose principal duty was that of preparing and publishing such data. It was probably due to the circumstance that the office of the Registrar-General of Births, Deaths, and Marriages had usually been employed as head-quarters for the intermittent Censuses that this officer in many of the States was selected as the Statistician, and in some instances received that or a similar title in addition to his title of Registrar-General.

(iii) *Prominent State Statisticians*. Amongst the various holders of the position of Government Statistician, or its equivalent, three stand out prominently in respect of their efforts to place Australian Statistics on a satisfactory basis. The earliest of these was Mr. H. H. Hayter, who filled the position of Government Statist of Victoria from 1873 until his death in 1895. Under his control the "Victorian Year Book" and the Statistical Bureau were initiated, many marked improvements were effected in the collection and tabulation of statistical data, and a reputation for careful investigation and lucid interpretation was established. Under his guidance excellent statistical data for Australasia were compiled annually, and he was an untiring worker in the cause of statistical uniformity. His nosological index for the classification of causes of death was long a standard work in the field of Vital Statistics in Australia. The next in point of time of the three mentioned above was Mr. R. M. Johnston, who filled the position of Government Statistician in Tasmania from 1882 until his death in 1918. Like Mr. Hayter, he was a keen advocate of uniformity throughout Australia in the compilation of statistics, and gave great assistance at various statistical conferences, particularly in the matter

of classification of data. He was a man of diversified attainments, and his influence on the development of statistical investigation in Australia was considerable. The third of the State statisticians indicated was Mr. T. A. Coghlan (now the Hon. Sir T. A. Coghlan, K.C.M.G., I.S.O.), who filled the position of Government Statistician in New South Wales from 1886 to 1905, when he resigned to take up other duties. Under his direction many improvements were effected in the statistical compilations of that State, and the Statistical Register issued during and since his time is one of the most complete statistical analyses available of any community. A Year Book entitled "The Wealth and Progress of New South Wales" was published by him, and also a publication entitled "The Seven Colonies of Australia," which appeared at intervals of about two years. This latter is of some special interest as its general plan formed the groundwork of the present "Official Year Book of the Commonwealth of Australia." Apart from his individual efforts in the direction of statistical uniformity for Australia, Mr. Coghlan was also strongly in favour of the practice of holding periodical statistical conferences, and assisted at several of these in connexion with census and general statistics.

(iv) *Statistical Conferences.* To enable the statisticians of the several States to interchange ideas, and to ensure the attainment of results which would be capable of comparison and would be suitable for the ascertainment of aggregates for Australia, conferences were held from time to time in the several States from as early a date as 1861. There were in all six conferences prior to the formation of the Federal Bureau of Census and Statistics in 1906. These conferences took place respectively in 1861, 1875, 1890, 1900, 1902, and 1903, and in many cases were attended by a representative of New Zealand. By means of them a great improvement in the uniformity of statistical data was effected.

(v) *Federal Bureau.* Under the provisions of the Commonwealth Constitution, section 51, sub-section (xi.), power is conferred on the Federal Parliament "to make laws for the peace, order, and good government of the Commonwealth with respect to Census and Statistics." In compliance with this provision, the Census and Statistics Act 1905 was passed, and in 1906 the Federal Bureau of Census and Statistics was created. The first Federal Statistician was Mr. G. H. Knibbs (now Sir George H. Knibbs, K.B., etc.) who filled the position from 1906 until his appointment in 1921 to the position of Director of the Commonwealth Institute of Science and Industry. To the task of organizing the work of the new Bureau Mr. Knibbs brought a lengthy and varied experience in important branches of public service in New South Wales, and in the formation of his staff he drew largely upon the staffs of existing State Statistical Offices. One of the earliest steps taken was that of holding in November and December, 1906, a conference with the State statisticians to define the relations between the several Bureaux and to arrange for the interchange of data. The conference was marked by great cordiality between the various representatives, and an extensive series of forms was approved for the supply of data by the States to the Commonwealth. In each case, the State Statistician became the representative in his own State of the Commonwealth Statistician for the purpose of carrying out the provisions of the Federal Act. Some of the outstanding features of the Bureau's activities during the period of control by Mr. Knibbs were as follows:—

- (a) The initiation and annual publication of the Official Year-Book of the Commonwealth of Australia;
- (b) The annual publication of Statistical Bulletins dealing with the principal activities of the whole of Australia;
- (c) The quarterly (at one time monthly) publication of a Summary of Australian Statistical Data;
- (d) The formation of a Labour and Industrial Branch to record prices, wages, and kindred matters;
- (e) The taking of population censuses for all Australia in 1911 and 1921;
- (f) The taking of a special War Census (including a Wealth Census) in 1915;
- (g) The compilation and publication of a series of Life Tables for Australia and its component States, and of monetary tables based thereon.

The vacancy caused by the transfer of Mr. Knibbs was filled in 1922 by the appointment—as from 1st August in that year—of Mr. C. H. Wickens, who had previously filled the position of Supervisor of Census in the Bureau.

(vi) *Uniformity of Statistical Control.* At various dates since the creation of the Commonwealth, proposals have been made for the unification of statistical compilation in Australia. Under the provisions of the Federal Constitution the item "Census and Statistics" is not allocated exclusively to the Federal Parliament, but is one of those matters in connexion with which powers may be exercised concurrently by Federal and State Legislatures. In the matter of the Census, the States have ceased to function since the Commonwealth undertook the work, but the right of a State to take a Census at any time is not vitiated thereby. In the field of General Statistics, on the other hand, there are now seven separate bureaux operating. As, however, each State bureau is concerned solely with its own territory, and as in many matters the Commonwealth Bureau is largely interested in the presentation of the data for Australia as a whole, there is not a great deal of overlapping or duplication of effort. Such duplication does, however, exist to some extent, especially in the matter of publication, and at conferences of the State Premiers in 1906 and 1918 resolutions were passed in favour of combining Federal and State bureaux, but in each case the idea was subsequently abandoned. At a conference between Federal and State Ministers in May, 1923, the matter was again under consideration, and a resolution in favour of one statistical authority for Australia was passed, the consideration of details to be left to a conference of Commonwealth and State Statisticians. This Conference was held in October, 1923, and formulated a scheme for the transfer of such of the State Bureaux as the Governments concerned desired to hand over to the Commonwealth. The Tasmanian State Bureau was transferred in November 1924; and in some other cases the matter is still under consideration. On the 18th August, 1924, and succeeding days, a conference of the Government Statisticians of the Commonwealth of Australia, the Dominion of New Zealand, and the several Australian States was held in Adelaide to discuss arrangements for increasing the efficiency and uniformity of statistical compilation, and for diminishing the amount of duplication of effort still existing. The results attained were very satisfactory, and are likely to increase the value of the statistical data of the two Dominions.

(vii) *Present Organization.* The existing organization in respect of the collection tabulation, etc., of statistical data as between the State and Federal Statistical Bureaux, and State and Federal Government Departments, is set forth in the accompanying conspectus.

PRESENT ORGANIZATION OF STATISTICAL COLLECTION, TABULATION. SUMMARY AND REVIEW.

A.—CLASSIFICATION ACCORDING TO SUBJECT.

Note.—C.S.=Commonwealth Statistician. S.S.=State Statistician
C.D.=Commonwealth Department S.D.=State Department
(non-statistical). (non-statistical).

Subject.	Collected by—	Tabulated by—	Australian results summarized and reviewed by—
I. Population—			
(i) Census	C.S.	C.S.	C.S.
(ii) Vital Statistics	S.D.	C.S. and S.S.	C.S.
(iii) Migration	C.S., C.D. and S.D.	C.S.	C.S.
II. Production—			
(i) Land Settlement	S.D.	S.D.	C.S.
(ii) Agriculture	S.S.(a)	S.S.	C.S.
(iii) Pastoral	S.S.(a)	S.S.	C.S.
(iv) Dairying	S.S.(a)	S.S.	C.S.

(a) State Police collect original individual returns from owners, occupiers, etc., without charge (except out-of-pocket expenses).

PRESENT ORGANIZATION OF STATISTICAL COLLECTION, TABULATION,
SUMMARY AND REVIEW—*continued.*A.—CLASSIFICATION ACCORDING TO SUBJECT—*continued.*

Subject.	Collected by—	Tabulated by—	Australian results summarized and reviewed by—
II. Production—<i>continued.</i>			
(v) Mineral	S.D.	S.D.	C.S.
(vi) Forestry	S.D.	S.D.	C.S.
(vii) Fisheries	S.D.	S.D.	C.S.
(viii) Water Conservation	S.D.	S.D.	C.S.
(ix) Manufacturing	S.S.(a)	S.S.	C.S.
III. Transport and Communication—			
(i) Railways—			
(a) Government (C'wealth) ..	C.D.	C.D.	C.S.
(b) Government (State) ..	S.D.	S.D.	C.S.
(c) Private	C.S.	C.S.	C.S.
(ii) Tramways	C.S.	C.S.	C.S.
(iii) Shipping	C.D.	C.S.	C.S.
(iv) Posts	C.D.	C.D.	C.S.
(v) Telegraphs	C.D.	C.D.	C.S.
(vi) Telephones	C.D.	C.D.	C.S.
(vii) Aircraft	C.S.	C.S.	C.S.
(viii) Motor Vehicles	S.D.	S.D.	C.S.
IV. Trade and Commerce—			
(i) Imports	C.D.	C.D.	C.S.
(ii) Exports	C.D.	C.D.	C.S.
(iii) Customs	C.D.	C.D.	C.S.
(iv) Excise	C.D.	C.D.	C.S.
V. Finance—			
(i) Commonwealth	C.D.	C.D.	C.S.
(ii) State	S.D.	S.D.	C.S.
(iii) Private			
(a) Banking	C.S. and S.S.	C.S. and S.S.	C.S.
(b) Insurance	C.S. and S.S.	C.S. and S.S.	C.S.
VI. Social—			
(i) Education	S.D.	S.D.	C.S.
(ii) Hospitals	S.S.	S.S.	C.S.
(iii) Charities	S.S.	S.S.	C.S.
(iv) Judicial	S.S.	S.S.	C.S.
VII. Labour and Industrial—			
(i) Prices	C.S. and S.S.	C.S. and S.S.	C.S.
(ii) Wages	C.S. and S.D.	C.S. and S.D.	C.S.
(iii) Industrial Disputes	C.S. and S.D.	C.S. and S.D.	C.S.
(iv) Trade Unionism	C.S. and S.D.	C.S. and S.D.	C.S.
(v) Unemployment	C.S. and S.D.	C.S. and S.D.	C.S.
VIII. Local Government			
.. ..	S.S.	S.S.	C.S.
IX. Miscellaneous—			
(i) Electoral	C.D. and S.D.	C.D. and S.D.	C.S.
(ii) Meteorological	C.D.	C.D.	C.D.

(a) State Police collect original individual returns from owners, occupiers, etc., without charge (except out-of-pocket expenses).

PRESENT ORGANIZATION OF STATISTICAL COLLECTION, TABULATION, SUMMARY, AND REVIEW—*continued*.

B.—CLASSIFICATION OF SUBJECTS ACCORDING TO DEPARTMENT RESPONSIBLE FOR COLLECTION.

Data collected by—			
Commonwealth Statistician.	Commonwealth Department (non-statistical).	State Statist.	State Department (non-statistical).
Census. Migration (Rail). Railways (Private). Tramways. Aircraft. Banking. Insurance. Prices. Wages. Industrial Disputes. Trade Unionism. Unemployment.	Migration (Sea). Government Railways (C'wealth). Shipping. Posts. Telegraphs. Telephones. Imports. Exports. Customs. Excise. Finance (C'wealth). Electoral (C'wealth). Meteorological.	Agriculture. Pastoral. Dairying. Manufacturing. Banking. Insurance. Hospitals. Charities. Judicial. Prices. Local Government.	Vital Statistics. Land Settlement. Mineral. Government Railways (State). Motor Vehicles. Forestry. Fisheries. Water Conservation. Finance (State). Education. Wages. Industrial Disputes. Trade Unionism. Unemployment. Electoral (State).

C.—CLASSIFICATION OF SUBJECTS ACCORDING TO DEPARTMENT RESPONSIBLE FOR INITIAL TABULATION.

Commonwealth Statistician.	Commonwealth Department.	State Statist.	State Department.
Census. Vital Statistics. Migration (Rail and Sea). Railways (Private). Tramways. Shipping. Aircraft. Banking. Insurance. Prices. Wages. Industrial Disputes. Trade Unionism. Unemployment.	Government Railways (C'wealth). Posts. Telegraphs. Telephones. Imports. Exports. Customs. Excise. Finance (C'wealth). Electoral (C'wealth). Meteorological.	Vital Statistics. Agriculture. Pastoral. Dairying. Manufacturing. Banking. Insurance. Hospitals. Charities. Judicial. Prices. Local Government.	Land Settlement. Mineral. Government Railways (State). Motor Vehicles. Forestry. Fisheries. Water Conservation. Finance (State). Education. Wages. Industrial Disputes. Trade Unionism. Unemployment. Electoral (State).

D.—THE AUSTRALIAN RESULTS ARE SUMMARIZED AND THE STATISTICS ARE REVIEWED BY THE COMMONWEALTH STATISTICIAN IN ALL THE CASES ABOVE EXCEPT METEOROLOGICAL STATISTICS WHICH ARE DEALT WITH ENTIRELY BY THE COMMONWEALTH METEOROLOGIST.

2. Sources of Information.—The foregoing conspectus gives in concise form the main sources from which general statistical data are obtained. It may be noted that such information is furnished in various ways—(a) Directly, in response to the Commonwealth Statistician's demand; (b) by the State Statisticians who collect directly from individuals or through the medium of police officers or special collectors; (c) by Commonwealth and

State Government Departments either in their Departmental Reports or in response to special inquiries (the Commonwealth Trade and Customs Department supplies returns of Trade, and of Customs and Excise); (d) by scientific and technical experts invited to contribute special articles for the Official Year Book.

In addition, information may be obtained through the State Statisticians acting in the capacity of duly constituted officers under the provisions of the Commonwealth Census and Statistics Act.

§ 2. Statistical Publications of Australia.

1. **General.**—The official statistical publications of Australia may be divided bibliographically into two main divisions, viz. :—(1) Commonwealth publications dealing both individually and collectively with the several States of the Commonwealth, and (2) State publications dealing with individual States only. Besides these there are many other reports, etc., issued regularly, which though not wholly statistical, necessarily contain a considerable amount of statistical information. The more important of these published to August, 1925, are indicated below.

2. **Commonwealth Publications.**—Commonwealth publications may be grouped under two heads, viz. :—(i) Publications issued by the Commonwealth Statistician, and (ii) Parliamentary and Departmental Reports and Papers.

(i) *Publications issued by the Commonwealth Statistician.* The following is a list of the principal statistical publications issued from the Commonwealth Bureau of Census and Statistics since its inauguration up to August, 1925 :—

Australian Life Tables, 1901–1910. Australian Joint Life Tables, 1901–1910.

Census (1911) Bulletins.

Census (1911) Results.—Vols. I., II., and III., with Appendix “Mathematical Theory of Population.”

Census (1921) Results.—Bulletins, Nos. 1 to 26. Report, Parts I to XXI.

Finance—Bulletins, 1907 to 1916–17 annually; 1917–18 and 1918–19 (one vol.); 1919–20 and 1920–21 (one vol.); 1921–22; 1922–23; 1923–24.

Labour and Industrial Statistics—Memoranda and Reports, various, to 1913.

Labour Report, annually, 1913 to 1924.

Local Government in Australia—July, 1919.

Official Year Book of the Commonwealth of Australia—Annually, 1907 to present issue (1925).

Oversea Trade, annually, 1906 to 1923–24.

Pocket Compendium of Australian Statistics (formerly *Statistical Digest*), 1913, 1914, 1916, and 1918 to 1925 annually.

Population and Vital Statistics Bulletins—Reports, various. Commonwealth Demography, 1911 to 1924 annually.

Production—Bulletins, annually, 1906 to 1923–24.

Professional Papers—Various. A full list will be found in Official Year Book No. 13, p. 3.

Quarterly Summary of Australian Statistics—first issue, No. 70, December, 1917; replacing *Monthly Summary of Australian Statistics* (Bulletins 1 to 69), and incorporating data from earlier publications relating to Labour, Shipping, Trade, Vital Statistics, Oversea Migration, etc.

Social Insurance—Report to the Hon. the Minister of Trade and Customs, 1910.

Social Statistics—Bulletins, 1907 to 1915 annually, and 1918.

Superannuation for the Commonwealth Public Service—Report to the Hon. the Minister for Home Affairs, 1910.

Transport and Communication—Bulletins, 1906, 1908 to 1916 annually; 1919 to 1924 annually.

Wealth—The Private Wealth of Australia and its Growth, as ascertained by various methods, together with a Report of the War Census in 1915.

(ii) *Commonwealth Parliamentary and Departmental Reports and Papers.* Lists of the principal official reports and other documents containing statistical information issued from the inauguration of the Commonwealth were given in Year Books up to No. 15, but limits of space preclude the incorporation of this information in the present volume.

3. *State Publications.*—The chief statistical publications of each State are set out hereunder. Limits of space preclude a further enumeration of the various Departmental Reports, statements of accounts, etc., issued by officials, boards, local government bodies, etc., in each State.

- (a) New South Wales—Statistical Register (annual); Official Year Book of New South Wales (annual); Statesman's Year Book (annual); Vital Statistics (monthly and annual); Statistical Bulletin (monthly to December, 1919, thereafter quarterly).
- (b) Victoria—Statistical Register (annual to 1916, then discontinued); Victorian Year Book (annual); Vital Statistics (annual and quarterly); Statistical Abstracts (quarterly to 1917).
- (c) Queensland—Statistical Register (annual); Official Year Book, 1901; A.B.C. of Queensland Statistics (annual); Vital Statistics (annual and monthly).
- (d) South Australia—Statistical Register (annual); Official Year Book, 1912 and 1913; Statesman's Pocket Year Book (annual); Returns of Births and Deaths (monthly).
- (e) Western Australia—Statistical Register (annual); Statistical Abstracts (quarterly, previously issued monthly to July, 1917); Pocket Year Book of Western Australia (annual); Circular (monthly), containing Principal Statistics.
- (f) Tasmania—Statistical Register (annual); Statesman's Pocket Year Book annual, from 1915; Statistical Summaries (annual); Vital Statistics and Migration (annual and monthly).

§ 3. Bibliography of Recent Works on Australia.

1. *General.*—In Official Year Book No. 13, a list of the principal general works dealing with Australia and Australian affairs, published from 1901 to 1920, will be found. Of the publications of the first eighteen years of the Commonwealth the more important are now repeated, with a fuller list of works published within the last six years.

- ALLEN, NELLIE B. *Africa, Australia, and the Islands of the Pacific.* Boston, 1924.
- ANDERSSON, G. *Australien : Natur och Kultur : Studien och Minnen.* Stockholm, 1922.
- ARMOUR, Rev. J. *The Spell of the Inland : a Romance of Central Australia.* Melbourne, 1923.
- ATKINSON, MEREDITH (Ed.). *Australia : Economic and Political Studies, by Various Writers.* Melbourne, 1920.
- AUSTRALASIAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE. *Biennial Reports of Proceedings.*
- BASEDOW, DR. HERBERT. *The Australian Aboriginal.* Adelaide, 1925.
- BEAN, C. E. W. (Ed.). *Official History of Australia in the War of 1914–1918 (in 12 vols.).* Vol. I., Sydney, 1921. Vol. II., Sydney, 1924.
- BEAN, C. E. W., and GULLETT, H. S. *Official History of Australia in the War of 1914–18.* Vol. XII. Sydney, 1923.
- BLAND, F. A. *Shadows and Realities of Government, W.E.A. Series,* Sydney, 1923.
- BOLAM, ANTHONY G. *The Trans-Australian Wonderland.* 3rd Edition. Melbourne, 1924.
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